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ABSTRACT
Project Quest offers a strong approach to the problem of developing programs aimed at educational leadership in New Jersey. The primary goal of the project is to enhance in this leadership their knowledge of child growth and development, and their feel for, and sensitivity to, appropriate modes of education for young children, as well as pervasive awareness that what happens in the education of the very young child has implications throughout the educational process and in all the complexities of life. The thrust of the project is to match what has been learned about the process of growth and development of the child, and the process by which children actually learn the educational processes of the schools. Where the educational process does not "fit," that is, where it is not based on a developmentally sound model, an area for potential change is identified. In the first phase of the project, more than 50 educational leaders attended a week-long conference on early childhood education. The focus of the conference was on "The Child From Three to Eight." Workshops on specific task-oriented topics and field trips to model programs are being held regularly. In progressive steps, the project staff and consultants will work with the participants as change agents in the local community to bring about a closer match between the educational process and the processes of growth, development, and learning in the young child. (CK)

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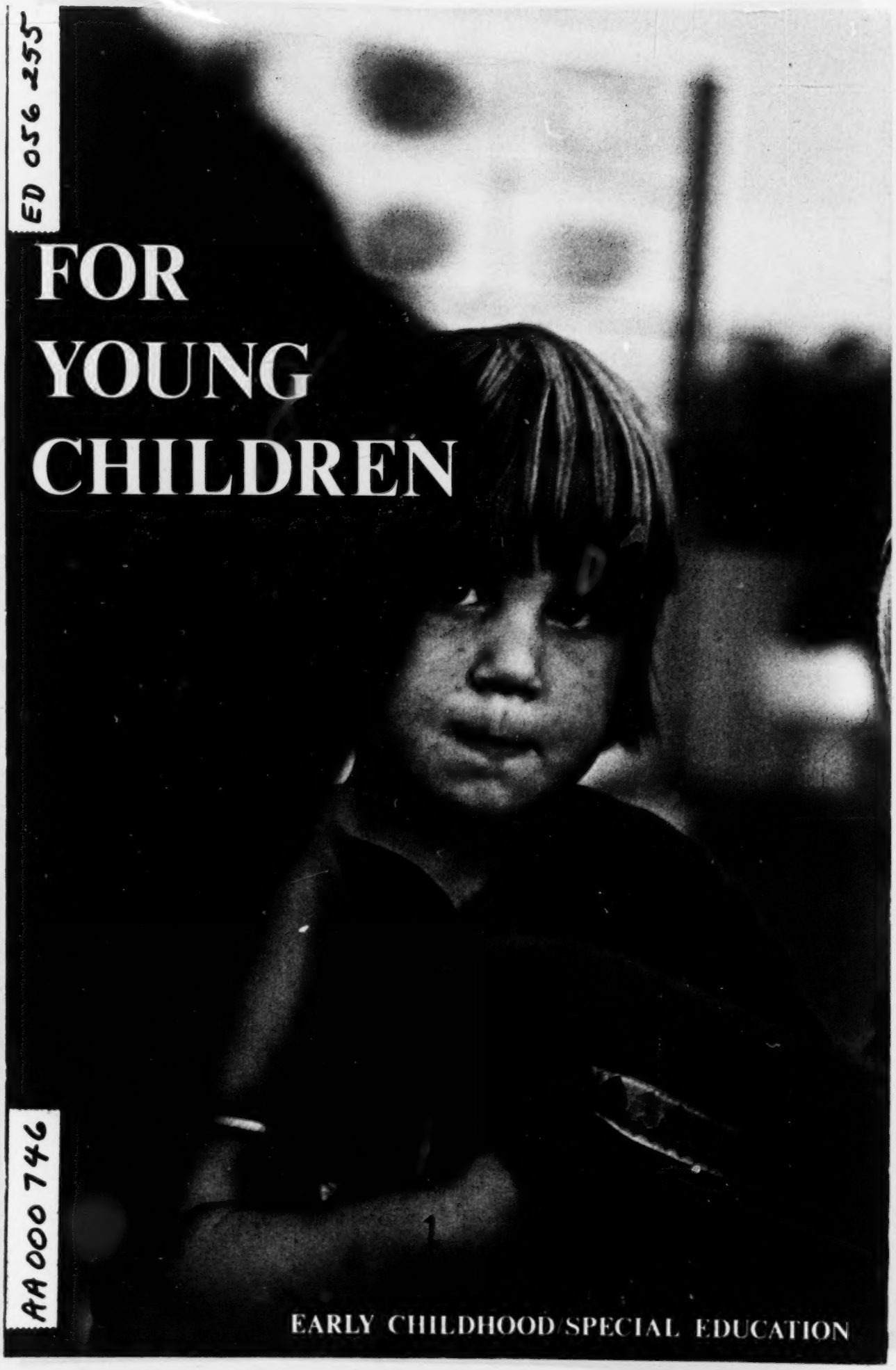
FOR YOUNG CHILDREN



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EARLY CHILDHOOD/SPECIAL EDUCATION

FOR YOUNG CHILDREN

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CONFERENCE REPORTS

September 27 - October 2, 1970
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Education Professions Development Act
Project Quest
New Jersey State Department of Education

EARLY CHILDHOOD/SPECIAL EDUCATION - EPDA

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PROJECT QUEST

An EPDA Project in Early Childhood/Special Education

Sponsored by the
New Jersey State Department of Education

As educators, we are all too well aware of the differences that often exist between good ideas for which it is easy to give lip service, and meaningful activities which translate good ideas into effective programs for children. There are reasons–often very good reasons–why the individual educator finds it difficult to tread new paths.

At this point in time, however, it is becoming increasingly difficult for the well-informed educator to ignore the growing body of evidence pointing to the importance of early childhood education as a foundation for further study, and for life itself. As the focus of modern education has shifted from *teaching* to *learning*, a greater emphasis has been placed on the way in which a child learns–and the ways in which he learns how to learn, or not to learn, in school.

This is not unknown territory. Research into how children grow and develop, and how they learn, has been pursued through the years and is continuing apace. And model programs based on child growth and development–on the needs of young children–are already operating in many parts of this country and other countries as well.

In other words, the "good idea" is extant. However, in the predominantly rural eight county region of Southern New Jersey, the means of translating the idea into meaningful activities has, until very recently, not been generally available.

The needs and capabilities have been ever present in Southern New Jersey as well as in any other area. Unfortunately, over the years, education in our State has been characterized by a dichotomy of operation implanted upon but not deserved by our children. Necessary funds, staff and personnel must now be made available for all areas of New Jersey to develop a contemporary and comprehensive approach to the education of all

young children.

Project Quest offers a strong approach to this problem. Funded through a substantial Grant from the U. S. Office of Education under the Education Professions Development Act (E.P.D.A.) the project is aimed at educational leadership throughout the eight southern counties, as well as supporting leadership at the statewide level.

The primary goal of the project is to enhance in this leadership their knowledge of child growth and development, and their feel for, and sensitivity to, appropriate modes of education for young children, as well as pervasive awareness that what happens in the education of the very young child has implications throughout the educational process and in all of the complexities of life.

The thrust of the project is to match what we have learned about the process of growth and development of the child, and the process by which children actually learn, to the educational processes of the schools. Where the educational process does not "fit"—that is, where it is not based on a developmentally sound model—an area for potential change is identified.

In the first phase of the project, more than fifty educational leaders attended a week-long conference on early childhood education in Ocean City, New Jersey. Participants included elementary school principals, county and district superintendents, helping teachers, learning disabilities specialists, parochial and private school administrators, and representatives from the State Department of Education, ESEA Title I and III projects, and from a variety of other projects and programs. A strong interest in the project and its initial conference was expressed by many other people throughout the State.

The focus of the conference was on "The Child From Three to Eight." The morning sessions of the first two days were spent observing children in Head Start, nursery school, and kindergarten settings. Each participant was asked to select one child and follow him for the morning, noting what he did and said on an observation form supplied by the consultants. It is important to note that the participants were sent out to observe *children*, not classrooms, teachers, or programs.

In other sessions, participants discussed what they had learned from focusing on the

child, and worked together with nationally known consultants in the field of early childhood education, toward developing further insights.

At mid-week the participants began to concentrate on what came to be known as "the task." At first they were asked to think of a few very young children–specific ones, for which they have a responsibility, or a personal concern, and to think about "what personal attributes, what abilities you would want to help these specific children develop that might help them (1) cope with this world they're growing into, and (2) enable them to better this world a little bit."

While the responses varied among the participants, they evolved into six categories:

1. To be happy with one's self, to have a feeling of self-worth, and self-awareness.
2. To have an attitude toward mankind of tolerance, acceptance, respect, love, and responsibility for other people.
3. To acquire skill techniques, to be competent, to be able to think logically and analytically.
4. To have an openness to ideas, an openness to others, and an ability to adapt to change.
5. To learn to be honest and sincere, and to have some moral sense of right and wrong.
6. To have a sense of courage, and the confidence to try something you're not quite sure about.

Having listed these attributes, or similar ones, the participants ascertained key objectives to which they could feel a personal commitment–objectives that would further the goal of helping children in their local areas develop the attributes and skills listed. Keeping these to a manageable number on which they could actually work, it then became possible to think of strategies and techniques for meeting these objectives.

Explicit to these personal and professional commitments were the next steps built into the structure of the project, namely participant designed action research which will enable each to investigate modes of further development.

Instructional media of all types are being produced to support the project participants. As a first step, all consultant presentations at the leadership conference in Ocean City were recorded on audio tape and closed circuit television, and are being made available for smaller workshops and training sessions.

Workshops on specific task-oriented topics, and field trips to model programs are being held regularly. Capsule conferences are scheduled as the interfacing of needs, objectives, and techniques develop among the participants. Material from the first of these capsule conferences is also included as a part of this report. With the assistance of the project advisory committee and the continuum of evaluation, the needs of children and community are constantly within focus.

In progressive steps, the project staff, and valued consultants, will work with the participants as change agents in the local community to bring about a closer match between the educational process and the processes of growth, development, and learning in the young child. Meanwhile, the participant numbers have enlarged through the planning of the original fifty to approximately 150 educators committed to change and improvement in early childhood education. It is hoped that the near future will offer opportunity for the expansion of the project, as frequently requested, to implement viable program development throughout the state.

Should enthusiasm for involvement in the developing of early childhood programs arise from this project such success must be attributed to the responsible attitude of the original participants whose constant interchange, communication and articulation has characterized the project from its inception.

This renewed emphasis on early childhood education is a cause whose action time has come.

Dr. D. Keith Osborn

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The University of Georgia

PERSONAL-SOCIAL ATTRIBUTES OF CHILDREN FROM BIRTH TO EIGHT YEARS

I would like to talk with you a few minutes about some of the personality attributes of young children, and then see how we see these reflected in curriculum in nursery school or preschool programs and in the kindergarten. I just want to remind you that even though I'll talk about the whole child, I am academically separating him, and you'll have to come back tomorrow to get the rest of the child when Dr. Gardner talks about the intellectual or cognitive attribute. So today I'll try to stay away from that piece of the child.

I'm going to talk about personality in the young child, and I'll give a definition to start with, so at least we know where we're headed for. By personality, I mean, "the feeling, thinking, acting, human being who, for the most part, can separate himself from the other selves in society."

So, in effect, you don't have a personality, you *are* a personality. By "feeling," in that part of the definition, I mean the emotional part of the make-up. By "thinking," the cognitive part that Dr. Gardner will talk about tomorrow. And by the "acting" part, I mean the physiological, physical attribute. So we're talking about a total person who is

able to separate himself from others in society. I mean a healthy personality, too, maybe I should say that first. By a healthy personality I mean somebody who is able to separate *himself.* For example, if you go to psychotic behavior and, if you go around saying, "I am thou and thou are we and thee are me," you've got a problem. Or if you go around saying, "I'm Napoleon" and "I'm Josephine" you've also got a problem, because you're not able to separate out, "this is me," and, "this is not me."

We do believe that this kind of thing happens very, very early in life. Now even though part of my training was Freudian, I'm not Freudian in background, so I won't go back to conception. I'll at least start at birth, although recognizing that the child brings at least certain physiological attributes from even before birth.

But we believe, and I guess most psychologists would believe, that–in terms of the feeling, thinking, acting part–at birth, or shortly after birth, you begin having experiences which are bombarded against this physiological equipment that you have. If nothing else, that at least begins to start early attitudes that will stay with you the rest of your life, from which subsequent attitudes will be formed, or on which they'll be based. And further, if you don't get educated in some way later in life to change your perception, the earliest perceptions will stay with you.

The best example I can give of this is when I was a kid about four years of age in St. Louis. We were living in an apartment, and the apartment next to us was occupied by a young couple named Penelope and George. They were a young married couple, and everybody called Penelope, "Penelop," leaving off the "e" sound on the end. So the only thing I'd ever heard was, "George and Penelop." I was four, and we used to go over to Penelop's house and yack with her and she'd give us cookies, and I have never run into another Penelope in my whole life. In fact, the next time I ran into a Penelope was when I was a Sophomore in College reading Maxwell Anderson's play, where there's a strumpet named Penelope, and one of the leading characters walks up and says good morning to her. So we were in class, and you know how you read out loud, and I go up and I say, "Good morrow, Penelop," and everybody laughed at me.

It took me another four or five years to get over Penelop. I have never run into anybody named Penelope yet. But the point I'm making is that I was taking four year old learning, and using it as a sophomore in college, because nothing had occurred in the meantime to change that perceptual experience. For this reason we believe that these early years are very important either for later attitudes, or as the base on which later attitudes are formed.

Now learning begins, as I said, at birth, or right after birth. Well let's look at what we have at birth. We have a child about 19, 20, inches long; seven, eight, nine, pounds, somewhere in there, with no vocabulary. And yet, within an hour after birth, he will already be uttering phonemes, and these phonemes will be so predictable that we can get an infant phoneme vocabulary by one month of age. A lot of things are happening to him. And when I say *to* him, I mean that, if you look at an infant who is nineteen or twenty inches long, weighing ten or eleven pounds, he's not going anywhere.

As I trust you know, a human infant left alone will die. If he's not cared for, or nurtured, he'll die. I don't give a darn what they say about Romulus and Remus, or these so-called wolf children. You know, every once in a while on a slow press day, you'll read about a wolf child in India they've just discovered, who's twelve, and been raised by some animal out in the wilds. I guess those stories are finally going to go away, because we have fewer and fewer slow press days.

But at any rate, we know now that this child left alone will die. Everything comes in–mama, papa, the baby brother, the little sister–everything comes in to this child. And, actually, the child, at this point in life, develops what we call a *sense of trust,* or a sense of security. He actually has no other option. That is, he's just about got to trust people to nurture him, people to take care of him, people to guide him, and so on. We do feel that

this sense of trust is most paramount, psychologically, the first year or so of life. Now hopefully, and this does not happen with all children, but, ideally, we would like children that first year of life to learn "I can trust mama to come, the environment to be stable, to be nice, to be comfortable, to be warm, to be loving."

And yet we know for many children, instead of developing a sense of trust in the first year of life, they develop *mistrust:* "I can't count on certain things to happen."

Now this is not only true of ghetto children–although it is true of many ghetto children where they cannot rely on some sort of stable adult in their life–it's also true of many middle-class children, where the child may be unwanted, or there are terrible tensions in the family. It is certainly true of the child with physical handicaps. If you happen to be a Cerebral Palsy child, a sense of trust is pretty darn hard to come by. But, ideally, in the first year of life, we hope that the child will at least get some beginnings on development of a sense of trust. There is also some data to suggest that in this first year of life, and the early years of life, it's very important that the child not only get taken care of physiologically–that is that he gets enough to eat, that he gets the right warmth, that he gets clothing, and so on–but the studies also suggest that the young child needs another ingredient, and this is called "love" on their charts.

There are some studies that suggest that children without this may, in fact, die of a malady called marasmus. This happens in institutions where children are taken care of physiologically, and yet die. And the illness has been called marasmus–death due to loss of love, or loss of caring.

I dare say even in New Jersey, as there are in other states that I visited, you'll have children's wards where children are cared for–at least they're fed, and they're changed periodically, and so on–but the death rate there is pretty high, and the chance for intellectual growth or stimulation is almost nil. There may be so many kids in an institution with so few people to care for them, that the children's arms are folded as infants, and they feed them with the bottle, but they don't use the infant's arms to hold it, they put a thing up so the bottle is held. Or the infant may lay with his feet stretched out, and after a year the child grows that way. You won't see these wards if you just walk into a children's institution. But they are there, where you have a child a year and a half old who can't undo his arms because they've grown together, or who can't wiggle his ankles because they've grown that way.

I worked with a hospital like this, one time, and it was literally so bad we did nothing to these children until, if we had an extra space where we could teach one to walk, we would take the child out of that ward, surgically break his ankles and fix them back so he could walk, and surgically break his arms so that we could begin exercises for him to move again.

The point I'm trying to make, here, without making you sick is that there are a lot of kids in this country that cannot develop a sense of trust, but instead develop a sense of mistrust. And, then, subsequent things come very, very hard. Because, if you don't develop a sense of trust in the first year of life, or at least get a good start, you've got to develop it somewhere, later, or you go through life mistrusting individuals.

Let's be positive at this point. Let's hope that most of the children we know, or that we see, have developed this to some extent, and we can leave the sense of trust in limbo for a moment.

Let's look at a second personality sense that begins to develop shortly after birth, but reaches its height during the second and third year. And that is a *sense of autonomy.* We see this, mostly, in children between the ages of one and a half and three–somewhere in there. By the way, if this were a parent group I was talking to, I would very quickly add, don't hold me to the years, I'm not playing Gesell with you. I trust this group is aware of the wide amount of individual variation–you saw that in the school this morning, that is, some children are very articulate, some are not, some are tall, some are short–and that

this is just a kind of guideline to work on.

Hopefully, by this point–and you'll notice this is even before we see them in public school–our children will have developed some feeling of self, some sense of independence. This ties very closely with Freud's idea of ego development or self development. Hopefully, in this period of time the child begins to say two things, "I am a *me*," and, "it's worthwhile to be a *me*."

Now, we know that there are many kids for whom this just isn't so. One of the biggest problems with the ghetto child, today, is that very often he is told, "You're not a *me* and it's not worthwhile." We know this happens with Indian children, in this culture, who are told that they are less than human beings. We also know that this happens with middle class kids whose parents would gladly repress their kids, and tell them that they don't count.

By the way, this is a very fascinating period. Let's see what's happening here. In the first year of life–or the first months of life anyway–everything's coming in. But by the time you get about eight or nine months old, and begin to walk, you get autonomous, and a few things start going out. You begin to talk, and develop a wonderful thing in your vocabulary called "no." Mommy says, "Do you want to do so and so?" And you say, "No." These are, of course, the nice conflict situations that begin to develop with children. Real conflict begins to develop, so that a child of fifteen months is beginning to develop a self.

Now, ideally, we don't want a child of nature. That is, he can't do everything he wants to all his life. But, ideally, we hope that parents will allow children to be autonomous, to experience, to experiment, to test, to try out things, to hypothesize and then test out the hypothesis, and so on.

But if you've had kids, you know that this is a tough time for parents. Some of you may remember that Thorndike, the well-known psychologist, once said "The only good thing about a two and a half year old is that in six months he'll be three." This is the kind of thing we see with these children. They love to eat cigarette butts. In a place like Ocean City they would enjoy eating sand. There's nothing nicer, if you're two, than to go out and eat sand, and eat cigarette butts, and paint on the curtains, and, you know, all these good things.

But let's see what the child is doing. He's really saying "I'm a *me* and what can *me* do?"

Earlier, when I was in clinical psychology, I think the thing that troubled me probably more than anything else was to see a twenty-year-old who didn't know who he was. It's even more tragic to see a forty-year-old housewife who doesn't know who she is, who really has no sense of *me*. I have run into more thirty-five and forty-year-old women who say to me "I'm not worthwhile. I don't count. It doesn't matter. Nobody cares." And before long, then, they say, "And I don't either."

Now, if Freud is right, this didn't develop when that lady was thirty or twenty-five or twenty. It begins developing back even before you see the child, when he's two and three years of age.

Obviously the reverse of this is that by the time we see this child in school, a child who is very restrictive and closed in does not experiment. He does not explore. He does not feel worthwhile. He does not feel he has anything to offer, and so on, and on, and on. You'll notice, from our definition, that this is really to the first half of the definition: "feeling, thinking, acting human beings who, for the most part, can separate self." I point this out, because if New Jersey does go into nursery school, you're going to see a difference between the way you handle these young children from the way you handle them even in kindergarten or first grade.

You're going to have to allow these kids to learn to be a *me*. And this means a lot of times getting paint on the wall, on the floor, on the teacher, on the hair, until finally they

get smart enough to say, "Hey! Look! It goes on the paper." So this is a very important piece we're talking about here. A person who is able to separate out self and say, "That's me and it's all right to be me."

Now there is a third part of it that happens about when we begin to see the children in kindergarten. And this is the third sense, called the *sense of initiative.* And this occurs around four, five, six years of age, somewhere in there.

Let's look a minute, though, developmentally, and just see what we have before we even get to four years of age. Back in the sense of autonomy so much growth has occurred that by the time the child is just a little over two years of age he is more than half his adult stature. You see, an awful lot of growing is going on before you even see children. If you want to be real cute and take something home for your husband or your wife (you know, they say, "You were up in Ocean City all week, did you learn anything?") you can say to them, "Do you realize that by the time a child is two he has reached half of his adult stature?" That's something that will throw them–they'll not know that. And if you want to be real cute, the mean age is two years, three months and fourteen days.

The point I'm making here is that when children are very, very young they've already gone through a lot of experience, and a lot of growing. They are now beginning to talk. They say things like "Bsssst." That's a word approximation, that means "cookie." Or they say, you know, "Hup," other things like that. By the time *you* get the child, though–as we saw today in our group, and I'm sure in others–children are speaking four and five word sentences. They are really beginning to move. They're a little taller, a little bigger. A lot of the baby fat is gone, and so on.

And this then pressures in this sense of initiative. Before this point we've been concerned with, "Can I learn to trust myself? Can I learn to trust other people? Can I learn to trust the environment I'm in?" Hopefully he's learned that. And secondly, hopefully, he's learned, "I'm a me and it's all right to be a me." Once children have learned that, they now are ready for initiative, which in effect says, "I know who I am and I'm pretty happy with who I am, but what about all these other people that are around me? Who are they? And what do they do? And how do they fit in?"

And, of course, here the child is initiating activity, and intruding on, and going out to see other people, and what do they do. Hopefully, the child will get some sort of positive attitude that, not only is he worthwhile, but others are worthwhile, others count, that we are social animals, that it's nice to interact and interchange experiences with others.

It's also at this time that we get another Freudian term–*super ego.* The child begins to develop some sense of conscience, some sense of right and wrong, of appropriate and inappropriate. We also get something else occurring at this time, thank goodness, called impulse control. When you're two you're inclined to hit everything and everybody. By the time you're five, you should begin to understand you can't hit everything and everybody, because you can't win 'em all.

You know the difference, if you've ever worked in a nursery school with two year olds. One of the terrible things about two's is that they have two and three word sentences. And if mother keeps saying something long enough, you know, they rote it–they finally memorize it. And you'll see a little two year old walk up and grab a toy from another child, and say "We share here!" And it's very confusing, because they don't know how to share, they don't know how to take turns. I used to tell my teachers working with two and three year old children, "Don't go around saying to children, 'We take turns here,' because it doesn't mean anything. Just walk up to them and say 'dumboguwooky!' It will make you feel better, and it won't mean any more or any less to the child, you see.

The nice thing, about the time we get to this age for kindergarten, is that children have a concept of two, and three, and four, and five. And they also begin to have a concept,

not only of me, but of all these others who are out here–you and you and you–an awareness of them. So now the teacher can say, "You take two turns Johnny," and Johnny knows who he is. "And then Sammy gets two turns," and Johnny knows who Sammy is. So we begin to get impulse control.

Now there are a couple of tasks here for both the parent and the teacher. One, we hope the teacher and the parent help the child to begin to get a sense of conscience without an overladen sense of guilt. And the same way with impulse control. To begin to get a sense of sharing and taking turns as his obligations without feeling overly guilty when he doesn't do it. Because no five-year-old is perfect. They will not share all the time. There are days when a kindergarten teacher can't buy a sharing turn to save her life. You survive those days, and try not to have children feel overly guilty when they goof up.

And, hopefully, out of this we got the rest of the definition: "the feeling, thinking, acting human being who for the most part can separate himself from the others in society." Hopefully, by this point, he's saying, "I'm a *me* and it's all right to be a *me*, and you're a *you* and it's all right for you to be *you*." Now, as you will quickly recognize, we haven't achieved even this simple goal very well in this society. But it seems to me this is one of the goals that we've got to work toward.

The clinical data–not research data, I don't have a chi-square with me–suggests that this is the time that this occurs. If we are to help children be happy to be themselves, if we are to help children learn to accept others, and be happy with them, we've got to get to work at this point. Because, if Freud was right–and I don't mean just Freud; I doubt that you could find a clinician in most of the more popular fields who would not feel that this does occur at this time–then these attitudes are formed at this time.

Now I want to take a few minutes and talk about curriculum. If the teacher is armed with this what does she do about it? I'm going on the assumption that given any group of children, any reasonable group of children, the kindergarten teacher is going to find children that come in that may have some sense of trust, but not very much. And given any group of kindergarten children the teacher is going to have some kids who don't have much of a sense of autonomy, or much of a feeling about *me*. And certainly, even by definition, a big area she is going to have to work in, is to help children learn to share, and get along with others, and be aware of others, and so on.

Now, given this, it seems to me, there are several things the teacher wants to consider

in her curriculum. We won't have time, really, to explore this too far, but maybe we can start it, and when you get back home you can explore it further for yourself.

One of the nice things about a kindergarten or a nursery school is that it should be a trusting place. If you're an administrator, and you have one of these, and it's not a trusting place, I will not be democratic about it, change it. I'll be autocratic about it: if you have a place where the teacher is hot one day and cold the next, and shouting one day and calm the next, get rid of her. I don't care if you've got to put her in your office. Get rid of her. Because you cannot build a sense of trust with a mistrustful teacher. An unpredictable teacher does not, in fact, build trust or assurance, but only confusion and doubt. We need the best teachers we can get in preschool and kindergarten experiences. We've got to have teachers that are predictable, that care about kids, that will build, so a child can come in and say, "Hey, man, I can trust that broad."

Because at home, man, there are changes all the time. Daddy's out of a job, or off giving a lecture in Ocean City. Mama's in the hospital with another baby. Sister's in trouble up to her ears with Universal CIT. We've just moved from one place to the other. All of these things happen at home. There is one place that ought to be reasonably predictable. In that room, the child has the right to expect a rather stable individual, a rather predictable individual who will set a climate and a stage that says, "a lot of things are changing all over, but here's one place that will be reasonably comfortable and reasonably alike from one day to the next." And that's what I mean by a sense of trust. A rather unfrantic teacher who doesn't scare kids.

I got sick the first year I went down to Georgia, and happened to go over to Atlantia. I was working with the public schools and Teacher Corps, and I went down a hall and heard the most hollering kindergarten teachers. It's cruel. It's bad enough to have a hollering college professor if you're an undergraduate or graduate student–remember how it scared you? Imagine being five and having a hollering teacher. We need teachers that are predictable, that say to children, "You can trust this place."

And, frankly, a number of our schools aren't very trusting places right now. We have to help children learn to trust the environment and to trust themselves within that environment. Now, one of the things we can do is not present children with material that is way above their heads. Because it's darn hard to learn what you can do when the material is totally inappropriate. And this is one of my arguments with some of the so-called innovative materials today. As J. McB. Hunt talks about the problem of the match: the materials are so mismatched with the kids we predict failure, not success. You see, the equipment's got to be trusting. That's why you've got little chairs in that room. It's something the child can handle and manipulate and say, "By golly, I can lift it, and I can carry it around, and I can put it down and I can sit in it." This is what I'm talking about. Trust. That the books in that room that you read to the child are appropriate. Now we're getting a lot better with that, but we're talking about getting materials, play materials and work materials, that are at the child's level, so he can succeed. One of the biggest problems today is to have a child who cannot succeed at home, and then we bring him to school to show him "man you ain't going to succeed here either. Just in case you thought you'd find a success experience, you better look somewhere else. Because it's going to be failure at home, and failure down on the corner, and failure in school." And how can you build trust under that set of circumstances?

Well, you get the idea. You see, an administrator needs to sit with his teachers, and I don't mean haphazardly, but systematically talk with the teachers in terms of what are you doing to build a situation that says to the child, "You can trust."

Let's talk about autonomy. Maybe we already know all the answers to that. How do you help a child learn to be a *me*?

One of the ways we help children be a *me* is by frankly having a messy room. You know, to me, a badge of success in kindergarten teaching is a messed up room. If I walked

in and saw everything in place I'd worry about a compulsive teacher who had toilet training too early. If everything's neat it may please the teacher, but that's not the way five-year old kids are. How many spills did we have today, Mrs. Ritter, four? That's about average for a small class. When you're working with children like this, if they are to express themselves and be themselves, there are things that happen in a room that aren't always what we would want. That's the way kids are. And if we are going to let kids learn who they are, we're going to have to let them experiment.

This is why I would be against a totally structured program. It lets a child know who the teacher is, and what she can do, but it doesn't let the child know who he is, and what he can do.

When we were talking about art, just a few minutes ago, I was reminded of one time in Iowa going into a kindergarten—a kindergarten, mind you—and the teacher had a thing of flowers setting on a table, and the children were all in rows in desks, and everybody was drawing the flowers on the table. Now, not only was this teacher confused psychologically, but physiologically in terms of expectations of children drawing flowers. I should say all the kids were *working* at drawing the flowers—all except one. The teacher proudly showed me how well they worked, and she told me about the turkeys they had worked on before. And as we're walking up and down the aisle, and all the children are working on this, we finally got to one little boy, and he's got a big piece of paper and is drawing all over it—having a great time. I said, "What are you doing?" And he said, "Man, I'm having fun!" And about that time the teacher walked up and said "He's a real problem!" Yeah, he'll probably be a Van Gogh someday, poor idiot!

But, you see, very often we won't allow children to be themselves Now, do not misunderstand me. I did not say let children do everything they want. I am not of the permissiveness ilk where you walk in with the children and you say, "Go, Kids, live!" I don't believe in that. But I do get concerned when we do not allow the children the chance to explore, and experiment, and investigate, hypothesize, test, generalize, hypothesize again, and test again and again and again. Because one of the ways you find out who you are, and what you can do, is by both succeeding and failing on your own.

You see a good room provides this. It recognizes that not all children do one thing. So a good nursery school-kindergarten room provides a wide variety of materials. If there's anything you should look for in a room it's a wide variety of materials, or materials that can be used a number of ways, like the blocks. Those darn blocks are expensive—$2.50—for a hollow block. But it's worth every penny, because today it was a book factory, and tomorrow it can be a super highway, and the next day it'll probably be the darn bridge that went straight up. There are a lot of things you can do with this—where children can take the material and interpret themselves through the material.

So we have to provide materials. And incidentally, we have to articulate this to school boards who want to know why the hell we're spending so much money down there in the kindergarten. And we have to articulate this to the parents to point out that this kind of play is an educational experience. We are not running a high priced baby-sitting service, we are allowing children to learn about themselves.

And now to the third—the sense of initiative—learning about others. This is why there was a doll corner in that kindergarten, today. Because one of the best ways to learn about other people is in a doll corner where you can act out mommy, or the sister in college, or the milkman, or the man down the street, or the grocery man, or whatever. And there are many experiences within the setting that allow children to interact with each other, whether we're talking about children learning to march together, sing together, or get up and pick out other children and interact. A school allows a lot of situations where a child can learn about all these others in society. That's why we take excursions in the nursery school and the kindergarten, to help children begin to relate themselves meaningfully with the other people around them, and put this into their life experience.

It's also the place where you get a therapeutic kind of value, where a child may have been to the hospital, or mother's been to the hospital, or something unusual has happened, and this gives a child a chance to translate this—to work it out in his own experiences and integrate it into his own life. This kind of material also gives the child a chance to take cognitive type materials that he hears the teacher talking about, and play it out, act it out, and integrate it into his own experience.

My three cohorts, here, said they wanted to hear about what happened after kindergarten. So I do want to just say a few words about what happens when the child gets into the first, second, and third grades—this period from five to six years of age up to eight or nine years of age. Now, actually, if you followed a Freudian content, you'd know that this period is called latency, and Freud called latency from about six up to adolescence. Later day psychologists have tended to break this area into two parts—from five or six up to about nine or ten, and then ten up to pre-adolescence. And it seems to me, in terms of children today, that that's not a bad break. That is, the pre-adolescent child we see today is different from the pre-adolescent child we saw when I was growing up. Kids have progressed that much. So I am going to spend a very few quick minutes on the period from six up to eight years of age.

The White House Conference calls this the age of the *sense of accomplishment,* and I think we can use that for our purposes. So now we have trust, autonomy, initiative, and accomplishment. I want to point out that there are still a number of children in the first grade, and even into the second grade, where trust is still not established. That you may run into children that still may not have a sense of trust, and, unfortunately, the school hasn't done much about it.

I think one of the saddest things, when I was working in Detroit, was at Merrill-Palmer. We would get kids twelve and thirteen that psychologically were back at three and four years of age. Not only had their families failed them, the school had failed them, and, by the time we saw them at twelve or thirteen, they were not interested in learning. They were completely apathetic. They very often had had contact with the police—several of them would be recidivist with the police and had had several contacts—for mugging or doing other things. And I just want to make this point: that even though I was emphasizing trust, autonomy, and initiative in the preschool-kindergarten years, this does not mean that the first grade teacher or the second grade teacher may not have to make a concentrated effort to build self-image in the child, to help the child see that he can succeed.

Actually, psychologically, this is the ideal time, if the White House Conference people are correct in calling this a sense of accomplishment. This is a period of time when young children *do* want to succeed. Actually, it's a period of time, and we're talking about first, second, and third grade, when the teacher can really get success experiences out of children. Their super-ego is operating very well, and I can still remember from when I taught kindergarten, that there is just that much difference from kindergarten to first grade. Kindergarten can still be pretty rough discipline-wise, but in the first grade the teacher can use the "good citizens" bit, and the children behave.

I can still remember teaching kindergarten. There was a first grade teacher across from me, and when I took my children to the bathroom, which was about eighty feet down the hall—the first little girl was headed in when the last boy's coming out the door—and I'm running up and down the eighty feet playing policeman, saying "get in line, be good, move fast, move slow, no, no, your're Johnny, you go in here, Sarah, you go here." And I still remember with real envy the first grade teacher walking out the door and saying, "Now all the good citizens will get in line and all the good citizens will march down to the bathroom." And they did!

I mean they really want to please the adults. And I think this is one thing administrators need to point out to teachers. Young children, by and large, do want to please adults.

They do want to be good citizens. They look up to teachers at this point. In fact we did a sociometric a number of years ago and we asked eight and nine year old children, "Suppose you were to go on a spaceship, who would you take along? Who would you like to be captain?" Most often it was Daddy to be captain, and to take along would be Daddy and Mommy, and if it was a boy a best boyfriend and the teacher, and if it was a girl a best girlfriend and the teacher. Teachers are very high, and parents are very high, at this point.

Coupled with this is the sense of wanting to get things done. Wanting to do things. And I think very often we miss the boat in school when we don't set the stage where the child can accomplish and know that he has accomplished. Where he has the feeling, "I not only know I *can* do this, I know I *did* do this."

This is the time—and I have often wondered why we haven't capitalized on it in education as they have with chewing gum and other things—when collections are important. Kids love to collect things, and I remember one study years ago, where the average number of collections an eight year old would have over a three month period would be ten collections. He's collecting coins one week, baseball cards the next week, bottle caps the next week, feathers the next week, and shells the next week. And this ties in with the feeling of wanting to do something that represents "this is me and this is something I can do."

It's also a time where Freud says a child gets to pay the parents back for being so protective of him. He wants to do for others, to say, in effect, "This is something I can do, and I can do it not only for me, I can do it for you."

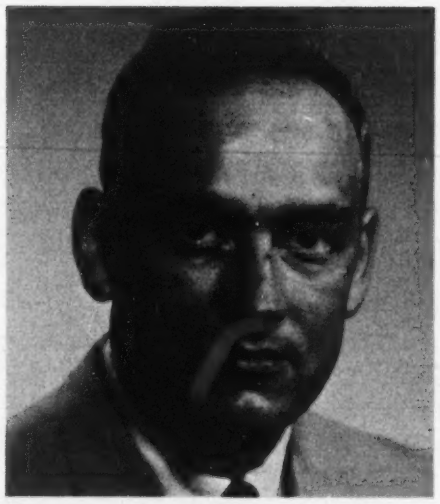
Just developmentally, another area I don't think the schools have capitalized on as much as other organizations is that this is often a time for ganging, or if you don't like that word, for grouping. And the groups are usually same sex groups. Boys prefer boys. Sex typing has set in, unlike kindergarten, although sex typing has begun to set in in kindergartens—generally the boys play with the boys, and generally the girls play with the girls—much more so than if you went to see a three year old group or a four year old group. But by the first grade and second grade, sex typing has set in so strongly that you tend to get ganging, or grouping, of boys and girls, and I think there are times when we can use this to advantage in education.

I know there are times when we use it to disadvantage. We sit an eight year old boy-hater next to an eight year old girl-hater and we think we have a discipline problem. It wasn't a discipline problem it was a developmental one. We just got them there at the wrong time. Put them together when they're fourteen and they'll love you. I think here again—we get the clue from this collection business—we have to remember that these children have a wide variety of interests. I often wonder if we're not using a 1910 curriculum with 1970 children—children who have many, many interests. There are many ways to teach math, and many ways to teach reading that capitalize on the wide interests that these children have.

Well, that's all I want to say about it, but I did want to give you at least partial closure that things do go on after the child leaves kindergarten, although I guess those of us in the field are inclined to forget that at times. In many ways it's certainly an ideal time, if education can just come up to the challenge, and recognize that with many children the challenge, in fact, is in helping them in terms of the earlier stages, as well.

Now our time is up, but maybe this will just start you thinking. This nursery-kindergarten-school mess is not an accident. There are things happening in these experiences that are educational, and are made with a plan to try to help children be better citizens both for themselves, and so we can learn to live together in this world.

Thank you.



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LANGUAGE, INTELLECTUAL, AND COGNITIVE ATTRIBUTES

Last night I was struggling for a quotation–you remember I was struggling for this quotation from William James–so I dug deep into the brief case full of stuff that I usually carry with me wherever I go, and I found that quotation, and I've got to give it to you.

William James said: "I have no doubt whatever that most people live, whether physically, intellectually, or morally, in a very restricted circle of their potential being. They make use of a very small portion of their possible consciousness and of their soul's resources in general, much like a man who out of his whole bodily organism should get into the habit of using and moving only his little finger. Great emergencies and crises show us how much greater are our vital resources than we have supposed."

He said this in a letter to a friend in 1906. And since I was in the process of looking up quotations I have another one that I have to give you. It came from another friend, from an even earlier day–a gentleman by the name of Socrates, who said in 400 B.C., "Could I climb to the highest place in Athens I would lift up my voice and shout, 'Fellow citizens, why do you turn and scrape every stone to gather wealth and take so little care of your children to whom one day you must relinquish it all?' "

I think maybe Socrates had something to say for us today, too. For my money, there's a lot of action where the young child is–a lot of action in language development, a lot of

action in cognitive and intellectual function. There's a lot going on long before we ever see the child. Even if we're fortunate enough to work with very young children–there's still a lot that has gone on before.

I have a selfish dream in my own work. I happen to be at Colorado State University. I would like to convince the people who control money at that institution that I need to have a Toddler Center, that I need to look at learning that is going on in children between eighteen months and about two and a half years. Because there is so much going on. There is just a fantastic rate of change in human action. This is a time when speech is really developing. This is a time when body control is really developing. It's a time of acquisition of concepts. If so much is going on, there, look how much of a foundation has already been established by the time we get a child in a four year old group or a group for fives. A tremendous amount has already been established in the way of a foundation for the learning that may be appropriate, right, and desirable, as we introduce them into the primary school experience. There is so much going on it's almost overwhelming at times. There's a lot of action, and, as my biases, I think, have already shown, I've got to know, I've got to be interested in the kinds of learning and the kinds of development occurring during this early, early period.

Any time I get in front of a group who are interested in early childhood at all, I can't resist reminding them of a quotation from William Carr, who, as many of you may know, was the executive secretary of NEA. In a meeting at Miami–it must have been five years ago, I'm not sure of the exact date–he said this in his major address to NEA, "Much of human development is determined before most of us set foot inside a school. Much, if not most, of what we become is decided in early childhood. The first three or four years of life are too important for schools to ignore. The best response," (and here he was pointing out some realistic awareness) "the best response at this level, is not to put the children in school, but rather to provide parents and prospective parents with information that will help them to give their child a healthy, productive start in life at home."

And if he had elaborated on that point, I think he might have said some of the very same things that Keith Osborn said yesterday in his discussion on the early determinants of personality development.

But let me go on with his quote: "Beginning at age four, however, schools can and should offer a direct service in the education of children. This suggestion is not for compulsory schooling at age four, but rather for its universal availability. This suggestion is not that the home be replaced, but rather that it be supplemented, beginning at age four instead of at age six, as at present. And, finally, the suggestion is not radical, though I would make it even if it were. Schooling before first grade is widely accepted, because parents regard it as useful, and because the American people know that many children are seriously handicapped without it."

This is very much in keeping with what we know about intellectual development, about social development, about the achievement of language competence, all of the rest. Very much in keeping with body control, with the ability to attend for periods of time, very much in keeping with the ability to make use of resources that are available in a more or less institutional setting, as well as resources available in private homes. Very much in keeping, in other words, in sum, very much in keeping with what we know about the fundamentals of child development.

The Educational Policies Commission, more than three years ago said, in effect, "We need education for four year olds available in this country and available at public expense." We have a long way to go in convincing ourselves that it's worth the cost. It is my contention that it is an investment that is well worth the cost, and that the picture of what education at all levels will look like, when we convince ourselves of the worth of this investment, is going to change rather dramatically.

I feel a little bit awkward, to say the least, about pretending to be able to do a job on

language and intellectual and cognitive development and all of the aspects of these areas. That language area, alone, I think, could occupy more than the time that we have available. Even a smaller chunk of language, such as articulation, which is really a very small part of the whole progress of language development, could take more time than we've got. I've been wanting to lead up to it though by saying, "Look, we have to know about these processes before we ever see the child, in order to understand what we've got to work with, if we're dealing with children in groups of four-year-olds and five-year-olds and six-year-olds, and so on. We've got to know many things that we can't even take time to summarize today.

I recall a research study that was done by the Frankenbergs many, many years ago, I think it was in the 1930's. The Frankenbergs, I believe they are husband and wife team, did a study on children's language in which they decided, "Let's just ask the direct question–what do children say?" And their sophistication and the area of knowledge about language development was such that they took the straight-forward or simple-minded approach: we will follow children around and record what they say, and then we will know. One of the children that they selected was a five-year-old girl, who said, during the course of one day, 14,930 words. She uttered 397 meaningful questions. And, incidentally, you should be asking yourself: what was the level of the response available to the child to those 397 meaningful questions asked during the course of the day? She used 1,967 meaningful complete sentences during the course of one day's observation. She asked five questions which were essentially meaningless questions. And there was 39 minutes of silence. That was, perhaps, the most dramatic finding of the whole study.

We all know that children at age four and age five ask a large number of questions. When we get into that we are talking about cognitive development. But we're also talking about a bridge between social and personal development and language and cognitive development. Because there's no question in my mind that a child asks questions for more reasons than just to get an intellectual answer. He asks questions, in part, when he's five-years-old, seeking a response. And this may lead some of us–who are contending with the barrage of questions that we get from young children if we allow them to express themselves–to get into the habit of saying, "Not now, dear," or "Ask me later," or "Ask somebody else." I remember being guilty of this with my own child, who was inclined to ask more than her share of questions. I was taking her to a preschool where she was enrolled. She asked me some questions at a time when I was driving the car and trying to prepare for my first class at the university at the same time–which is a very bad habit. I remember her asking me some questions about the lightning which was in the air at the time. I don't take any pride in this at all, but I was guilty of doing something that I think other people have done, too, saying, "Why don't you ask your teacher about that?" rather than responding to the sense of the question at all.

I'm using the point about questions, though, to illustrate the tremendous scope and breadth and intensity of what is going on in the intellectual and social worlds of young children. But it's a little overwhelming to me to try to contemplate a real coverage of language development as such. Instead, I've chosen to say most about the newer concepts of intellectual development, and, if you will, for the next few minutes, think of language as an accompaniment. As I try to summarize some basic points about intellectual development, ask yourself, "How is language an accompaniment and a supporting process in the whole notion of what intellectual development is all about?" Then I think it might still be a meaningful thing. And we will not make any pretense to be saying all there is to be said about the development of language processes *per se.*

Let me start out in the area of intellectual development by reminding us all that we don't think the same way about it in 1970 as we did even in 1960. We have some new concepts of what intelligence is really like. Some of these changed, or revised, concepts reflect the notion or the idea of intellect as applied at all levels, regardless of age,

regardless of social class, regardless of color, regardless of any other criterion. It's a different way of thinking about intelligence from what most of us in this room were exposed to when we went through our own educational processes. I don't think I'm the only one who got exposed to an idea of intellectual functioning that was a good deal more rigid, a good deal more fixed and static than what it is today. The best summary of the assumptions that we used to make about intelligence, I believe, was prepared by J. M. Hunt, a psychologist who has been at Illinois and has written rather widely on early intellectual development and intellectual processes in general. His early book, published in 1961, was really quite a revolutionary book. You can tell that it was revolutionary, because there were so many people who didn't like it. This is true of a lot of revolutionary ideas. It was revolutionary within the house of psychologists, in the sense that there were a lot of people who did not like it and found many excuses to criticize the evidence that Hunt brought to bear on the topic of intellectual development. Hunt's book, *Intelligence and Experience,* includes a summary of the assumptions that we formerly made. I read this with a good deal of recognition, because he was saying, in effect, the same things that I had been taught. And he was quite right, at least insofar as my experience can support it.

These were the assumptions that we made, and can no longer afford to make, about the nature of intellectual development. I'm going to summarize them.

We believed in a fixed intelligence. It was established once and for all in the act of conception.

Second, we believed in predetermined development. These are sort of redundant–they're saying the same thing–but he's reinforcing the idea in a second statement, a belief in predetermined development.

Third, we believed in the fixed and static "telephone switchboard" notion of brain functioning. That is, you put this into that, you have an association that's made, and that's that. That's the way learning goes. That's the way brain operation goes.

Fourth, we believed that experience during the early years, and particularly prior to the development of speech, is unimportant for mental development. We believed that experience didn't matter so much. Why? Because of the first beliefs that were sort of articles of faith, initially. It was already fixed. Intelligence was already established. It was already predetermined. Therefore, experience, especially early experience, had little to do with it. You see what these assumptions are leading up to, some very important implications for the kinds of stimulation we provide children in the early years.

Fifth, we believed that whatever experience does affect later development is primarily a matter of emotional reactions–primarily a matter of personality, social development, and so on. These were things that could be influenced by experience. We recognized this, in part, ever since Freud started talking about the impact of early experience on later personality development. He worked with upper middle class neurotics–had them recount their early experiences to him–and he found over and over again that early experiences played a role in developing their personal attributes, their ability to deal with conflict, their ability to deal with drives, with instincts, and so on. Ultimately, Freud convinced us all that early experiences were important for personality development. But it's interesting that it took until the 1960's–and in some places it hasn't been accomplished, yet–to convince us that experience plays a role in intellectual development as well.

Finally, the sixth item. We believed, I think, that learning must be motivated by homeostatic need, or by painful stimulation, or by some acquired drives based on these. There's a lot of jargon in that one, I think. But what it amounts to is saying if a child is to learn he's got to be punished for doing the wrong thing and rewarded for doing the right thing. And he himself then has to have the drive to get personal satisfaction, and then he'll do the right thing, the thing that we want. I think the most obvious application of

this principle is in the old "Spare the rod; spoil the child" philosophy. If you hit a child enough when he's doing the wrong thing, he'll stop doing the wrong thing. And the belief that this is really the sense of what discipline is all about, because of the nature of mental organization on the part of the child.

I'd like to add one thing to this list. This is my own, though, I can't blame Hunt for this one. I think we also made an assumption–and I think people in education made this assumption–that intelligence is a more or less monolithic quality. That when we talk about individual differences in children we're talking about having more of, or less of, this same quality–whatever it is. It's all like a lump–it's all like one big mass and we label it I.Q.–and you're either high in I.Q., or relatively high, or moderate, or normal, or low, or whatever. The implication of this assumption, that I think we made, is that if a child has a lot of this then fine, we can predict great things for him. If he has less of it, fine, we'll understand, we'll be patient, we'll accept that, but we won't predict the fine things for him.

Now my point is, that this assumption of a monolithic quality really led us into some nightmares in our relations with children. The assumption is, for instance, that if one child has more of this thing than another child we ought to put him into a different kind of experience. Will you please keep in mind our point about reinforcement. What do we reinforce a child for? Well, I think, there are some implications there. If we put him into an experience because we say he has more of this entity than another child, then we're in a position to reinforce him for a different set of actions than this other child that we have arbitrarily classified in some other group on the basis of I.Q. alone. I think my bias shows, here. I don't think I.Q. alone is a basis for classification that will take us where we want to go, ultimately. Look what it leads us to believe about two children who have the same scores. Both of them score 118, let's say, on a Stanford-Binet Intelligence Test. Our assumption is that they are the same intellectually. Now you and I can sit here and think about this and know immediately that that is utter nonsense. They are just not alike. Yet we have treated them that way, time after time.

Okay–that's an assumption that I think is particularly hazardous and particularly undesirable in its implications for what we do about children. Irving Siegal, in a very interesting article he wrote some years ago, noted a variety of ways in which the use of intelligence tests actively interferes with our understanding of the intellectual processes on the part of the child. One of the ways that it interferes is that it obscures some of the important qualitative differences from one child to another. I'll want to say a little more about that, and what I mean by it in just a moment. Here is the assumption that I think we made–I think I made it, and I think it's very easy for teachers to make it, and it's very easy for school people in general to make this assumption, because it helps us make decisions when the pressure is on us to make those decisions, and we have too many to make, and too few people to help in assisting us to make them–it's this assumption of intelligence as a monolithic quality that perhaps interferes most in our real understanding of the nature of intellectual functioning on the part of a child.

One of the things that I mean by that is that a newer concept of intellectual functioning includes, among other things, an awareness of, and a sensitivity to, qualitative differences from one child to another that cannot be covered or handled under the label of differences in I.Q. One child is 120 I.Q., another child is 115 I.Q., and the one with the lower I.Q. may be so creative, so imaginative, so open, so responsive to suggestions on the part of others, so ready to see new possibilities, that if we just deal with that I.Q. score, obviously, we're missing the boat. As a matter of fact, creativity is not limited to people who have three digits in their I.Q. There are those in the 90's, too, where we can find creative action and creative processes on their part. Creativity, I'm saying, may be a much more important consideration than score on an intelligence test. I wish we knew more–I'm sure all of us wish we knew more–about the nature of creativity, and about how we

can play an active role in supporting creative mental action on the part of children. We'd all like this. We just simply don't know enough about it yet. We're too late, it's way too late for us really to be just beginning to explore and investigate the nature of creativity, and the possibility of our playing a supportive part in producing and maintaining creative action.

I said earlier that I was going to say something about language, but as an accompaniment to this, I can't help but remind myself, right now, of the child who was normal in every way that we can imagine, every way that we can test, except for one little detail. He was a five-year-old boy and he didn't talk. No words. Zero! He just didn't talk. The parents despaired. He was an only child. They had given up. They had taken him to the psychologist, they'd taken him to the speech therapist, they'd taken him to their pediatrician, they'd talked to the school people—everybody that they could think of. He just didn't talk. No words.

One evening, when the mother was serving the family supper to the three of them, she put a dish of stew in front of the five-year-old boy. And the boy pushed that stew away from him and said, in words that were very loud, very clear, very articulate, and distinct, "I can't eat this slop!"

The parents were aghast. But, finally, the mother gasped out, "Son, you can talk. Why haven't you been talking all this time?"

And the boy said, "Well up to now everything was okay."

I don't know really whether that happened or not. I wasn't there. I can't vouch for it. But it's supposed to point out something that's important about language—and other processes, too. And I wanted to lead into discussion of newer concepts of intellectual development by saying intellectual development, like language, is based on need. I think most of us take for granted the idea that if a child doesn't need to say words, or doesn't need to say certain words, his language development doesn't move as rapidly as it should, or as we would expect it to. There are stories about children who don't talk, and then we find out, when we start looking into their case, that a mother, or father, or somebody, is anticipating their every need. They don't need to talk. We've heard these stories. We see the point behind them. Some of them may be a little overdrawn, but there is a point: that something as important and complex as language behavior—and believe me it is complex, tremendously complex—is need-based.

Well it's no accident that intellectual functioning—in fact I should say intellectual functioning *and* language, because they are so intermixed—is very much need-based. How does a child acquire concepts?

That's one key idea behind our new notion of intellectual functiong: the acquisition of concepts. It may be more important for us to understand the process of concept formation than it is for us to understand the normative line of developmental age. He does this at this age, and he can answer that kind of problem at that age, and he can solve this kind of problem at such and such an age. Fine, but can we understand, really, the underlying process of concept formation? Especially if we're interested in doing something about it, that is, helping a child, and facilitating his concept formation, we've got to be in a position to understand the process. Just knowing the normative stages—that is, a child will do this many things, and that kind of thing by age two, and so on at age four—that doesn't really help us understand such processes as concept formation.

So, we've cut ourselves out a bigger task, now, than what we had before when we just wanted to measure mental age, put it into a ratio with chronological age, figure I.Q., and that's how bright a kid was. Now, we want to know how did a child acquire concepts.

This is one of the things that Piaget has been all about. He wants to know, in effect, how does a child know anything? What is the source of a child's knowledge? And what are the processes that underline his reasoning and problem-solving? That means, among other things, concepts. Very basic concepts. Our new model of intellectual functioning, I

think, has to start with a very basic point: how do we function mentally, how do we work?

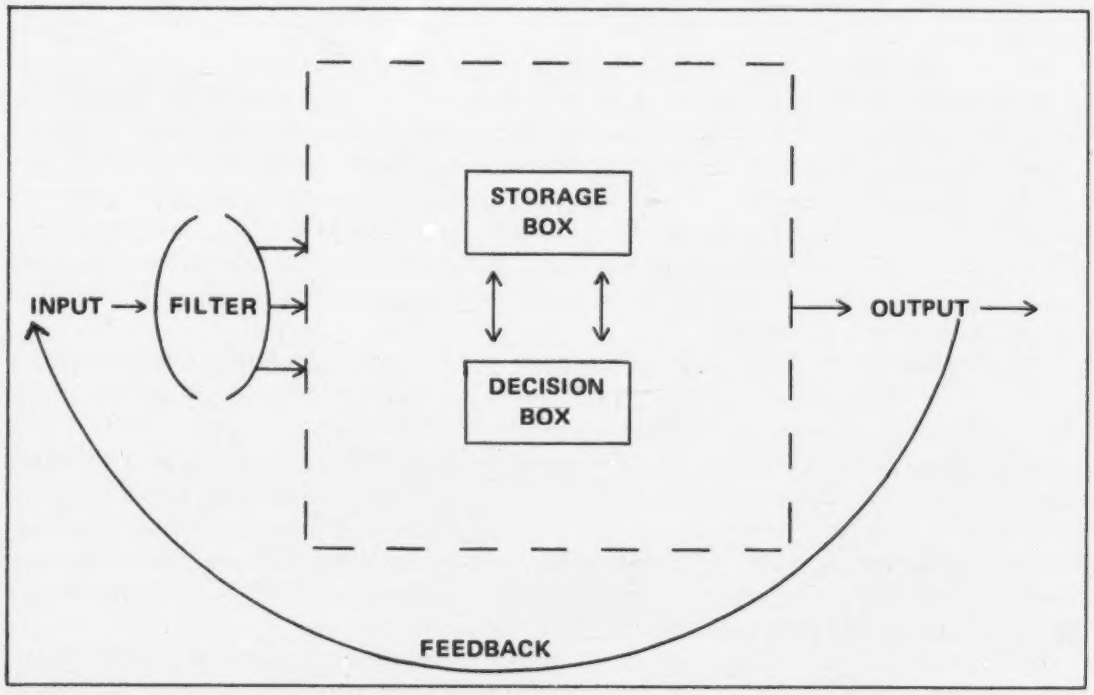

Figure 1

Let's get this diagram out here in front of us, first, because this is a key—a vital key to how our mental processes operate. We start with a brain shaped something like this. Let's put a lens in here, or perhaps filter is a better word for it, because everything that comes into the system, everything that is perceived by the system, comes through a very unique, a very personal, very idosyncratic, filter system. And yours and mine, and Mr. X's and Mr. Y's are all different. No two filter systems are precisely alike. There are individual differences within the culture. There are differences from one culture to another. I swear the Hopi Indian children that I have the privilege of visiting every so often just do not see the world as I see the world. I swear it is different. I can't quite put my finger on it, but it's different. I know they don't see inter-personal relationships the way I see them, or the way our middle class Anglo children see them. They don't see competition the way most of us see it. They have a unique filter system that's part of their culture, but even within that group I'm sure that there are individual filter systems as well.

So, whatever comes in through eyes, ears, touch, body pressures, temperature, whatever sensory capacities we have, whatever comes in, comes in through this filtering system. But now we're talking about a very interesting mixture of processes that go on here. Let's put two boxes in the diagram, not because they're really separate compartments, but because I want to emphasize an interchange that goes on. Let's call this one the decision box—the thing that calls the play, the thing that says, I decide to go that way instead of that way. I decide to respond to that teacher by saying two, instead of by saying four. I decide that my place to sit is at that table instead of at that table. I decide to hang my coat up or not to hang my coat up. When I make a decision, this is the box where that decision occurs. Do you follow? It's a pretty general box. There's a lot of action going on there all the time. I decide to look or not to look up, I decide to listen or not to listen.

We're not talking about a conscious decision, we're talking about a very elemental

mental process which is the determiner of mental action, or output–the determiner of what the output will be. The output can be in the form of a thought, in the form of a physical action, in the form of writing a letter, in the form of responding orally to a question and so on.

But it's this interchange, because the decision is not made just on the basis of what immediately comes in–the decision to act in X way or Y way is not based just immediately on the question or the stimulation of some kind–it is based on a very complex two-way interaction process between the decision box and a storage box of some kind. Call this storage box memory if you want, it's perfectly all right, but it isn't conscious memory. What we're talking about here is the storage of past perception. And the ability to call up past perceptions is a very precious human quality. Not that the lower animals don't have a storage system, but they don't have anything like the symbolic storage system of which man is capable.

And it's during the early years, by the way, that we see a flowering, a beginning, an emergence of symbolic processes which Piaget says mature during the adolescent years. This really marks a very special intellectual ability that man does have. A part of it is keyed right in here, the ability to store symbols. You don't have to store the precise tangible thing. You can store symbols of the thing. And this, if you think about it, is like many forms of energy. They're there. They're resources. But they are neither good nor bad by themselves, because, with our ability to deal with symbols, we can store some things that actively interfere with our ability to be human, as well as store some things that can make us more human.

But in order to have mental action, we've got to have a perception, and we've got to have something already there stored. Now don't any of you philosophers in the group start pinning me down to: if I really said that, did I mean that there had to be something there before, and before, and before–and how far back do you go? Piaget worried about this, too. So I'll anticipate it by saying, if you really want the answer to that question at least read Piaget first. That ought to hold you for a day or so.

Real mental action, as we're accustomed to thinking about it–at least with the children we deal with, because by the time we get them at four or five, believe me, there's a tremendous amount stored–real mental action has to involve this interchange. It's really a three way interchange: what's going on there on the outside; what's coming in, which, of course, gets bent a little bit as it comes in, according to this filter system which is really interacting with storage, too; and, in the interaction of storage with what's coming in, there is a decision to put out, in some way or another, some kind of action–which may be purely a mental function, not directly observable, may be speech, may be written language, may be physical behavior such as running, jumping, hopping, yelling, and so on.

There's another key ingredient that we've just got to put into our picture. And this is that the human being is capable of perceiving his own output. It's a very important one, and we can give it a label, too: "feedback." And I don't care whether any teacher knows or recognizes the word, or even cares about the word, but if he doesn't recognize the principle, he's in trouble. The teacher has to understand the importance of a child recognizing the effect of his own behavior. This is what so much of learning is based on–recognizing the effects of your own behavior.

Incidentally, this is the key to the way the reinforcement we've been talking about works. Because it's at this point, when I'm putting out some kind of behavior, when I'm giving the teacher some kind of action, at this point the teacher enters in, and the child is not only perceiving what he is doing, he's monitoring it. As he's making letters, as he's cutting out paper, as he's putting numbers on the domino blocks together side by side, as he's counting the children in the classroom, he's monitoring his own behavior. But what else is he monitoring? At the instant that he's monitoring his own behavior, he's also monitoring input in the way of new perception of how it is affecting the teacher. How am

I affecting the teacher? To what extent am I getting approval by that behavior? If I modify my behavior, and my output becomes a little different, what kind of reaction do I get now?

This is where the learning is. This is what reinforcement is all about. It tells me if I didn't get the approval this time–if I got a scowl, or a frown, or a headshaking, or a body shaking–next time I'd better do it a little differently.

This is a basic model. It looks very mechanical. It looks very mechanistic. But look at the implications: How important is it that a child be perceiving right now in order for his mental functioning to go on? We've discovered that it is so important–and not just for children–that we just can't survive psychologically, mentally we fall apart, unless we have sensation or stimulation from the outside to monitor in some way. We've got to have change. We've got to have an environment that is somehow shifting, moving, acting in some way, or we fall apart.

How do we know this? I refer to our Canadian friends who started some research over ten years ago on sensory deprivation. We won't go into the details of the strategy. The essence of the research was this: What happens when you reduce, and restrict, and, insofar as possible, eliminate outside stimuli? Look at the diagram. We've really got a circuit here. But what happens if we eliminate *input,* like opening a switch? You can say, well, if it were an electrical circuit the lights would go out if you open that up. You have to keep a closed circuit in order for the lights to stay on. And the analogy is not too bad, because this is exactly what happens. It takes a little time. In some subjects it took up to twenty minutes.

These were all volunteer subjects, not kindergarten children, not four-year-olds, but college subjects who were being paid. They did it on a volunteer basis, and they could have out of it any time they wanted to. But look what they went through. Some of the subjects were immersed in a tank. The water was heated in this large tank to body temperature–no thermal stimulation, no warmth or chilling on the body–the water was slowly circulating so there wouldn't be any heating up inside this tank. All light was cut out. All sound was blocked out. The only contact with the outside world was through a breathing tube, and a button that they could push to say, "I want out."

What happened? Many of the subjects reported a delicious relaxation at first. It felt so great, some of them dozed off. But then some interesting things started to happen: Complications. Hallucinations. Seeing things that weren't there.

One subject reported it like this: "I got panicky. I thought a thought, and then I got panicky because I couldn't help myself from thinking the thought again. It was like I had no control over what I would think."

The anxiety level would get up and they'd just have to get out of there. Some would hallucinate completely. Some had very bad bizarre kinds of thoughts, and actions, or thoughts about actions. Some were, for all practical purposes, out of it, like an artificial psychotic state between the time when they were brought out and when they recovered.

So what's the point of all this? The point of all this is to say that if we sever *input,* it's like short circuiting something. Because, obviously, from the case of the person who said "I thought a thought, and then I thought it again," what was happening? He was going around in this little *feedback* circle, because the end of the thought sequence stimulated the reoccurrence of the same thing. Why? Because there's no change from the outside to allow you to revise.

Now, how fundamental is this? Well, I can say it in a nut-shell. It may not mean too much right now, but I hope you'll think about it. *This is what readiness is all about.*

A part of our newer concept of intellectual functioning has a great deal to do with the nature of readiness for learning experiences–where does readiness come from?

You see, the older notion about intellectual processes in kids was that readiness emerges as a function of biological maturation: When the child is five, if he's normal in

intelligence, he is ready for *this* sort of thing, and we thought the kindergarten was an appropriate thing for him because he was biologically ready. When he's six and a half, mentally, he's ready to learn to read. By seven, 90 some odd percent are ready to read, because those who got delayed in starting reading instruction until seven years of age all learned to read. This was the research basis confirming, and rationalizing, what we wanted to do anyway, namely, to get into the real serious, earnest, hard stuff in the three R's when children are about six years of age, because that, we said, is when they are biologically ready.

What's the difference between that and the new approach? The new approach is tougher, you see. It places more of a burden on us. The new approach says we have a responsibility for *creating* readiness in children, because we no longer believe that it comes about just as a function of biological maturation. This is where experience comes in. This is why Hunt called his book *Intelligence and Experience.* Because the experiences that the child has actually organize his intellectual functioning.

Now there's where two of our best known and most thoughtful theorists about intellectual development and cognitive functioning get into the act. Jerome Bruner, a psychologist at Harvard, and Jean Piaget, the Swiss developmental psychologist, both have said, in effect, the same kind of thing: You create readiness by providing experiences to the child which are just a step ahead of where he is right now. Good teachers have done this as long as I can remember. They may have done it intuitively or they may have done it with careful thought and careful planning, but they have done precisely this. The theorists are sort of catching up, by saying, in effect, intelligence doesn't just happen, it is a reorganization, it's a revision, a modification of what's there.

I mentioned Bruner and Piaget–because both of them have had a great deal to say about the construction of readiness in the child. I wanted to have you identify these names, and I wanted to say that each has a notion about what brings cognitive development about–what stimulates it. And both, in the process of saying this is what brings about intellectual movement from one stage to a next higher stage, are saying that we have a responsibility for creating readiness for next steps in mental functioning. Neither one is willing to buy the notion that you wait for a child to mature and then you give him the experience. Both of them say you participate in bringing that level of mental readiness about. They outline mental development in slightly different terms, but they are very much in tune with each other–they communicate with each other very well.

Bruner says there are three main stages in cognitive functioning. He talks about an early, almost infantile stage–the enactive stage–where cognitive processes are sort of out at the fingertips, and what you see in the way of mental functioning is visible in the physical action systems of the child. Bruner uses this term, by the way, to describe his whole system. He's talking about levels of representation, which I think you can relate back to my diagram about mental functioning, because in this storage system, we have to account for ways of representing the world. By enactive, we would mean things like this–the infant is presented with the bottle, the nipple on one end, and immediately–as soon as it toughes the cheek, let's say–something happens. What happens? Lips start moving, sucking movement starts, and so on. Why? How do you account for it? Reflex, you might say; instinct, you might say. Bruner would say representation. This is enactive representation–his method of storing is through an action system: when X happens, Y's action system is called into play. You don't get anywhere if you ask the infant, "What are you thinking about?" Or if you try to examine the thought process in any more detail.

It's very much analogous to Piaget's use of the term "sensory motor stage"–sensory stimulation, motor action. The child is living out on the periphery, out on the fingertips. He is touched; he acts. This is what Bruner is talking about by the enactive stage. There's very little in the way of logic that goes on. Very little in the way of reflecting that "that is a nipple touching my cheek and therefore I think I feel probably like sucking on it."

You know, it doesn't make sense. The enactive stage doesn't call for all this internal mulling over, for making a decision in that sense. And yet in Bruner's way of thinking, there is a level of decision, even there.

Bruner talks about an ikonic stage, in which he's referring to a way of representing reality with *images.* Now this is an important distinction between what was going on before, in which there had to be an action system as a way of storing and representing the reality of the world, and the ikonic system, in which an image stands for the real thing. For example, your image of the bridge over to the mainland, your image of the water below the bridge, and so on. Is there color to it or do you just see it in black and white? By the way, how do you dream—in color or black and white? With what do you dream? With ikons, with images.

The imagery stage is a kind of an intermediate stage, and much of early childhood consists of this kind of storage system, this way of representing the world. Only after the child gets to this point—and now he's really approaching adolescence, although Bruner doesn't like to talk about precise ages—but only when he gets to the truly *symbolic* level, is he able to deal with logical systems. Because the symbols, now, can be manipulated very freely and there can be substitutions—this stands for that, X for Y, and so on. Why

do you suppose in the old days before we recognized what Bruner has been telling us, we traditionally taught Algebra in the 9th grade.

I don't know what your history has been, here, but back in my day and age, out West, it was ordained from on high that algebra would be 9th grade. Nobody had it a day before that, and everybody had it by the end of 9th grade. If you didn't have it then you were consigned to outer darkness. Not only was college not for you, the rest of high school was not for you. That was it. Ninth grade was algebra.

Why do you suppose we had learned that you don't have algebra before that time? Well, look, now, at what Bruner is saying, algebra requires a symbolism in which you actively lift symbols from objects and deal with them in an abstract way and manipulate them, and this requires a kind of thought process that in the normal course of events is really flowering at about that time.

Now, one of the reasons Bruner doesn't like to talk about ages, by the way, is this: He likes to say we can induce kinds of thought processes. Once we understand what lies before this; once we understand the fundamental steps–A leads to B leads to C–then our job becomes a very interesting one in curriculum development, in which we can create a curriculum we never dreamed of before.

Bruner proceeded to prove this to himself, in a variety of ways. He did such things with fifth grades, for instance, as asking them questions like the game of 20 Questions, because he was interested in another aspect of the new concept of mental functioning, namely, cognitive style, qualitative distinctions from one child to another. Not just the difference in brightness–how bright is this child in comparison with that one, and what will we do about it–but what's the difference in types of thinking, ways of thinking, ways of organizing thought processes.

He found, for instance, some children that he began to call "potshotters." Potshotters were children who were sort of impulsive in their approach to questions. And he found some other children, which he gave a very fancy label; he called them "cumulative constructionists." And these were only two of many classes and types of children in intellectual functioning, all of which he sorted out with this game 20 Questions.

He would ask children to solve a problem by asking *him* the questions. What is mental organization like? It's indexed, he said, by the way in which a child organizes a question. I wish we had time to talk about questions, really, and to point out how important it is for a child to learn to ask a question. Because, so often, what children learn is to ask non-questions. Bruner pointed out some mighty important differences between two general types of children. "Here is the problem," he would say to a fifth grade boy, "there was an accident. The man was driving the car and it ran off the road, and it hit a telephone pole and the man was hurt. Now your job," he would say to the child, "is to ask me questions which I will answer yes or no, and you solve the problem as to why the accident occurred."

Bruner would then illustrate with his potshotter type child: "Here's my potshotter," he would say. "Here is my child who asks me his first question, and it goes like this: 'Was the man hurrying to the hospital to see a sick friend and he got so interested in thinking about his friend, so concerned about him, that he lost track of what he was doing, he forgot to control the car and it slipped off the road and he hit the telephone pole and got hurt?' "

The answer is, "No," and the child hasn't gotten anywhere. In other words, this is a child who wraps up all of the possible hypotheses that he can think about in one big question–he's giving it all he's got–but then when he gets the answer, "No," he's gotten nowhere.

This is why the contrasting term that Bruner employs is the "cumulative constructionist," because this child is one who organizes a question, and the answer to that question can be either "Yes" or "No," but in either case he has learned something very important.

Of all of the possible things that might be the solution to the problem, the "yes" answer places some constraints on the possibilities that are there and the "no" answer places some constraints on the possibilities there.

Did you ever watch the old game, "20 Questions" on television. Very interesting if you looked at it from the standpoint, "what are the thought processes indexed by the questions that are being asked?" Some of those players were very good at it. They learned to ask very precise questions so they could solve very complex problems in a matter of three, four, or five questions.

In the case of this example, Bruner pointed out, "Here is my cumulative constructionist–instead of asking was the driver concerned about somebody in the hospital, trying to hurry to get there, and so on, the child thinks a second and then says, 'Was there anything wrong with the car?' "

The answer can be, yes or no. Either way you get some very important information. In this case the answer is no.

The child then says, after thinking a second, "Was there anything wrong with the driver?"

The answer is yes.

"Oh, had the driver had something to drink?"

The answer is yes.

"Was the driver drunk?"

"Yes."

And in four questions that one child that Bruner is illustrating has gotten to the solution of that particular problem. Because he knows how to ask a question that leads to a better question, a more precise question, one that's more on target. He knows how to start from the general and eliminate the non-essential through the questioning process.

This, Bruner says, is more important information about a child than his I.Q. This also, Bruner says, is something that the child can be taught. This is basic mental functioning–how to ask a question. It's only one characteristic of mental functioning, but how much more important, as a child moves toward symbolic processes, to assist him along the way to use those symbolic processes in the service of logical, orderly processing of information.

So Bruner has had some important things to say, and has had the audacity to say them about the curriculum, and, even though he's a psychologist, he has dared to say something about how the curriculum should be organized. This is some very interesting writing that some of us might want to go back and look at.

Let me just summarize by saying, I think mental development really includes four sub-processes. Now you don't think about them necessarily in relation to an age, because all of them go on really at all ages. But what I would like you to think about is how can the schools make better use of knowledge about these four sub-processes.

The first is *discrimination.* I'm sorry if the word has double meanings. I happen to like discrimination. I happen to think it's a very important psychological process, and I mean that in the literal sense. If a man can't tell the difference between Jew One and Jew Two, he's in trouble with himself. So I mean it literally.

I like discrimination, in the psychological sense of the word, because it really means telling important differences, and it really means refusing to live at the level of gross lumps, in which we put a label on that lump and say, "I can dispense with that lump. I can take care of that by assigning the label to it, and then I know how to deal with everybody or everything that fits in that lump." That's failure to discriminate. I think most of us learn to be more discriminating than that. But that's the first process, telling the difference. Telling the difference between a circle, a square, and a triangle, the difference between soft and loud, between hard and soft, the difference between warm and cold, between tall and short, between the number 18 and the number 20. All of these

are examples of discrimination. Discrimination learning is the fundamental process that we engage in when we learn to separate out–to call attention to this feature of the world, as opposed to that feature. It's fundamental.

But right on the heels of that comes a second psychological process, that of *abstraction.* In abstraction what we are all doing–whether we are very young, or very old–is lifting the quality of the thing from the form in which it's found. Lifting the greenness from that chair, and dealing with it as an abstract characteristic or attribute of the chair. You see, characteristics or qualities of our experience are always embedded in things,–except where they are stored up here in the head. We can store them up here as abstracts. But our initial experience with those attributes–shape, color, size, texture, loudness, softness, warmth, and so on–are embedded in other kinds of experiences.

Let me show you how much this penetrates into very important areas of our human experience. If we could not take the "a" from "cat"–and right now we're dealing with symbolism, this is a second level thing already, we're not dealing with the original cat, we're dealing with a symbol, with symbolic representation–but if we could not abstract the "a" out of "cat" and put it in another word, and recognize its sameness there, we would not be able to do the abstracting job. It would be a failure of abstracts.

We have to lift a quality from the thing in which that quality is manifest to us. Without that we would be so rigid, so inflexible; we would be tied to such a limited scale of mental functioning that we just couldn't operate in the complex society that we have. We just couldn't have all the things that we have–the language code system, the economy, a system of inter-personal behavior, a history, a culture, ways of relating to the universe, and so on–unless we could abstract the essence of something from the thing in which it is initially manifest. This is the abstraction process, following closely on the heels of the discrimination process. And following on the heels of that, a *generalization* process.

Incidentally, in case you don't see the relevance here, I would ask the question, "How does language participate in facilitating each one of these? How does the language of instruction participate? How does the child's ability to use a language system participate in the emergence of each one of these processes?

Generalization is a nice example of the need for language. What is generalization? Generalization is the forming of a rule, the forming of a principle, so that now the information I derive from an experience can be organized and stored as a general statement that I can recognize later, and apply later. I'm no longer limited to the immediacy of the thing. I can even anticipate conditions that I have never experienced, because I have formed general rules. Children are rule makers. Children are inventors, constructors of rules.

This applies very much to language. We used to think that language is a matter of a child learning to parrot back the words that he hears, learning to parrot back the sentences he hears. Let me give you one quick example to show you how wrong this is, because part of the new concept of intellectual functioning is that we recognize that the child is participating actively, dynamically, in organizing his mental life, and that includes organizing his language.

A father is taking a shower. He gets through with the shower, walks out into the outer part of the shower enclosure, and discovers, as he's groping around the wall, there's no towel. He hears the patter of his two-year-old son out in the next room, and he yells to his son, "Hey Bill, go ask mom for a towel!" And his son, not quite two, let's say, patters off, finds the mother and says–now think, what does the child say? Does the child say, "Mom for a towel." No, the child says something that he may never have heard in all his life. He says, "Daddy wants a towel."

What's the significance of that? The child has engaged in a transformation, based on his awareness of a need on somebody else's part. And that little instance of a transforma-

tion gives us a key to this special condition of man–the ability to take that circumstance, that need, that condition, and, using a different grammar, translate it into something else that makes sense to a party who wasn't even there in the original condition. That's part of what the code system is all about. There are rules that underlie the transformation of language parts from X condition to Y condition.

The child is a rule-maker. If we never tell him about these rules, he will discover them. In the process, along the way, he invents some rules of his own that he later has to revise. But now instead of thinking of language as something that we impose on a child so that he learns to mimic–this is the parrot theory of language development–instead of this, we think now of the child actively participating in organizing a grammar. Which is another way of saying organizing the rules, and modifying those rules when the original rules just don't fit any longer. This is the way he gets his language development.

Generalization is the process of forming a rule which will cover more than just the specific experiences that I've had up to now. It allows me to make predictions. I may find some of those predictions wrong, but at least I've made the rule, and I can test it out and see if it fits or not. Does language participate in generalizing? Of course. And there are children who over-generalize. All children over-generalize at one time or another. So they have to get more refinement. If the child is over-generalizing, we have to ask ourselves if we can help him discriminate. And if you've ever taught English, you know a lot of cases where you have to say, "Yes, that rule is right except. . . ." Because the best rule I know about the English language is that it has more exceptions than any code system I know anything about.

One final basic process in intellectual development is *articulation.* And I'm using that word, too, as a more basic concept than just articulation in the most obvious sense of the word. Let me illustrate it with a very homely example. If you ask a four-year-old child to sing a scale–*do re mi fa*–in all probability, unless he's an unusual four-year-old child, he will slur the thing together. He may get the idea of going up the scale or down the scale, but instead of making distinct separate elements of the component parts of that scale, which fit together in an orderly way, he will tend to blend them all together. There is a kind of a failure between these two processes. He isn't discriminating well enough between the *do* and the *re* and the *re* and the *mi* and so on. But neither is he bringing together–and that's the articulation part–the separated elements into a meaningful relationship.

Let me ask you this, what is your notion of creativity? I haven't told you what creativity is–I don't even know how to define creativity. But articulation, along with the other three processes, might give you some tentative approaches to what creativity is all about. It may be, for instance, that the creative person is the one who can articulate components of his environment in ways that other people haven't seen.

So if we happen to have a teacher who is very good at helping children articulate things–finding combinations and reinforcing children for their finding of new combinations of things–what we have, psychologically, is a teacher who is stressing the articulation process.

Now, there are some parts of our world which just automatically pay a premium for articulation. You have to recognize that we use articulation in the number system, because it's a matter of integrating, or combining and recombining sub-notions, sub-sets and larger sets.

A is embedded with B. And the child gradually comes to recognize that all robins are birds, but not all birds are robins. There's a kind of articulation involved there and you don't succeed very well in articulating a child's thinking on something like this–the inclusiveness idea–when he is only three years old.

What I've been implying, I hope, is clear. We need steps in experience which lead to intellectual formation, and not just a society that waits and says of its six-year-old

children, "Now it's time that you got serious." And we need, of course, a society that's willing to pay the cost. Because it is a costly business.

But if we really believe what I hope we will come to believe—that intelligence is organized by experience, and that we have a responsibility for bringing about that organization through experience—then, you see, the burden or responsibility is really on us. And part of that responsibility is to communicate it to other people, including the people who have to help us share the burden of the cost of this sort of thing.

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PHYSIOLOGICAL AND NEUROLOGICAL ASPECTS OF THE CHILD

You might be interested to know that the White House Conference on Children and Youth is divided into three different groups for this coming session. The part on children is going to be in December, from December 13 to 18, and youth will be in the spring of 1971, and then they're going to have regional groupings after that, as I understand it, and in about six weeks they expect to do all of the ground work and leg work on what children need, since 1960.

I have news for them. It took us a solid year, with many people working, to compile the reports that we had for 1960. Maybe they feel we're not fast enough to get information, but I'll be fast enough to tell them what they don't have. And, not trying to be nasty, but if we are in the role of representing children, I think we have to represent them, and not just put a lot of material on paper that perhaps is not pertinent to the needs of children.

Aside from that it's a pleasure to be here and be able to talk to you about my favorite subject, which is *neurological impairment.* We thought we'd divide the session into three groups this afternoon. We decided we'd give you the normal development of the nervous

system first. Then we would talk and have some fun on semantics of special education–just throwing words around, in other words. And in the last part I'll get into what is *neurological impairment?* What are the different types of impairment? How can they be diagnosed? What difference does it make in a classroom what type of medical diagnosis you have on a child–can you remedy this particular disability, and do you work through the disability or around it? And by the end of that time we'll all be ready to go for a swim in the pool, I think.

You have in your packet some notes, and I thought it would be easier, right after a delicious lunch, to keep your blood cells working instead of wanting to go asleep, if I kept your hands busy filling in diagrams.

Figure 1.

We represent this as a symbol of the whole child. The circle (figure 1) is divided into four quadrants, and these are the four quadrants representing growth. One quadrant would represent physical growth, one would represent intellectual growth, or mental growth, one would represent social growth, and one would represent emotional growth.

Now if this child is to remain a round wheel, all four quadrants of growth must be growing at the same rate of speed. Otherwise you end up having a child that is no longer a round wheel, but is becoming a square, depending upon which quadrant is not growing in proportion to the others that remain.

Now, we know that every child has his own rate of speed, but the majority of children fit into a certain time of growth. We also know that children have to learn and go up a spiral of learning (figure 2). The little round circle with the four quadrants represents the whole child. What we're trying to get across is that not every child is ready to ascend this spiral of learning at the same time. Just because he has become five years old, chronolog-

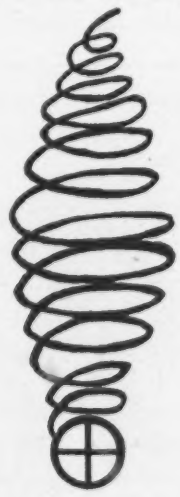


Figure 2.

ically, does not mean that he is mature enough to start the educational process that is considered in the classroom. Now, if you assume that, we know that every child is not going to go up this spiral at the same rate of speed, nor at the same smoothness of ascent. Not every child is going to reach his goal or goals.

But I think our biggest job is to ascertain, "is this child ready?" And what does readiness mean to every child, as related to this whole child? Are we taking a good look to see whether or not we're forcing our kiddies to go up this spiral of learning before they are neurologically ready to do so. For example, if we are teaching a child phonics before his hearing has developed or his auditory perception has developed, are we wasting our time? Because if he doesn't hear it, and doesn't perceive what he hears, and can't record it, and respond back out, are we wasting time with this child, when there might be a different approach? I just throw this out to you as a question.

I thought next we would go into how does the nervous system become ready for learning. Now you hear the term *perception* so many times–what does it mean? When you have a nervous system–and we all have them–you must develop this nervous system. You are born with a set group of cells, a set group of structures, but you have to develop the function of these structures and you have to develop a continuity and an integration of all of these. So I thought it would be easier if we showed you roughly what happens in the nervous system when you are developing visual perception. Now if your eye is a camera, and if this eye is seeing an image for the first time, then this image goes through the eye mechanism, goes through the brain itself, and is recorded on what we call *area 17,*

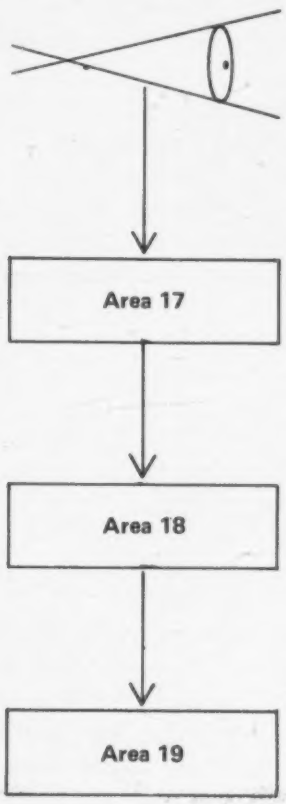


Figure 3.

(figure 3) which is the *occipital cortex.* That's in the back of your head, right here.

The second time this eye sees the image in the same way, it goes back to *area 17,* where it was recorded, then is transferred coming forward up to *area 18* of the same *occipital cortex,* which says, "I've seen this before."

The third time your eye sees the same image in the same way, going through this same sequence, it's then referred forward on the *occipital cortex* and higher up, where we have hearing coming in, speech going out, other senses coming in, and now this area tells us "I know what this is."

By the fourth time the eye sees the same image coming through this same sequence, you get what we call the *emotional response.* Now what is that? The child will say, "I know what it is," and they give the correct answer, and then we, as adults, react, "Oh, Johnny, Mary, that's wonderful!" And this is what breeds security and the feeling of confidence and success, when he can get right answers. Correct answers.

Now, suppose something happens between the eye and going to *area 17* or the *occipital cortex area* that makes the image go a different way and Johnny gives you the wrong answer. This is certainly not going to breed confidence and the feeling of success, because he doesn't really know why he hasn't gotten the same response from the adults if he thought he did it the same way each time. Enough incorrect answers develop what we call the *neurotic personality.* In other words, this is the person who feels that everybody has two left feet except himself. It was the teacher's fault. Or the boy in the seat next to him dropped the pencil so he lost his place. Or the teacher didn't tell him. Or mother didn't give him the proper lucky pants that morning so he could pass the test when he got to school. Any excuse, you name it, he'll figure it out.

You can see this starting along in children in the very early grades when they have been exposed to more failures than they have to success. But, again, this is what I see *visual perception* to mean. Now we know that as you learn to see and recognize what you see, then you're going to be able, hopefully, to go on into reading and to writing. Now, at the same time, you have to be learning to hear. You've got five senses working together–all developing at different rates of speed, according to exposure.

So let's get into *auditory perception.* I'm not very good at drawing, so if you can think of this as the lobe of your ear, we've got to get the sound in and around. As this is going in through your external canal, your auditory canal, the first thing it's going to hit is a drum. And this vibrates so that the three little bones behind it will get the message and carry the sound right on in to the inner ear, which takes it through our semi-circular canals, and through the cochlea, and then goes on into the inner ear, where again it's tried to be perceived. But it doesn't know what it's perceiving, until it gets to the eighth nerve and goes on into the auditory reception center in the brain itself, where it's recorded.

Now, if a child does not get the airwaves here–in other words the hard-of-hearing child–or something is plugging it up–wax, infection, what have you–he is not going to get the sound waves going through this normal way of getting to the brain to be recorded.

Now, some of our children have no problem in here. The sound can get through. And then you have Eustachian tubes coming up, which make you fill air into your middle ear. Some children can have infection there, so that the process of hearing a sound is blocked so it doesn't get to the brain to be recorded.

With some children this part of the mechanism will be fine, but when it gets to be the eighth nerve or into the auditory perception area, it doesn't seem to be understood. They cannot perceive what this sound is meant to be. And these are the kiddies you'll see in your classrooms, where you'll talk to them, and you almost feel like what you said to them is going through layers of the brain and you think, you know, "He really hasn't heard me," or "he really doesn't understand." And all of a sudden the lights go on in his eyes and it takes him just as long before he gets the right response out, and you think, "My golly, he does know!"

These children are hard to pick up, because they're really visual learners–they're *watching* for many cues, and not learning to *listen.* These are the children that, if you gave them three instructions at a time, would only be responding to the first instruction, when you're expecting a response to the third instruction. And if the first and third are not related, you feel, you know, this one is really not with it–I don't think he belongs in this particular group.

Now, where does auditory perception play a role in language? It plays a very large role in language, because if a child is not hearing the sounds for speech, he's not going to

reproduce them correctly. But language is more than just articulation, or pronunciation. It's "How do you use words to express a thought?" Children learn, or are starting to develop, their auditory perception right at the time of delivery. So auditory perception is starting right after birth. They learn sound and they learn to perceive what is frightening. They'll startle, or they'll cry for different noises. Many of them are startled in the early stages by male voices, and people say, "Oh, well, he's a frightened baby–the women should take care of the babies, not the men," because men with deep resonant voices are more apt to startle the baby. Not because they want to, but because their voices are resonant. If they put their voices in a falsetto the babies respond just fine. It actually works out fine, if you know that this is what makes the child's eardrums not vibrate quite so hard and fast that it scares them.

I think the important thing is if you find a child that has trouble with any type of language, whether it be the use of words or whether it be pronunciation, check on their ears and see whether they actually hear it. If they hear it, then there's more to be looked into than just their ears.

Now, at the same time, children are learning by the sense of touch, or *tactile perception.* You'll find when kiddies are little run-arounds in the preschool area, they want to touch everything. They have to touch everything. You've seen this I'm sure. And there are some people that never get past that stage, even as adults. If you've ever seen them in an antique shop, you know what I mean. They have to touch everything, even though it says "don't touch." But some people do learn better by touching, just as some people have to taste things before they can learn about them, or they have to smell things.

These senses are all being started with a baby right in the new-born nursery. And they get very, very specific about their sense of taste in the first six months of their life. Any mother who has fed a baby any of the foods that the doctor says are good for him, and had it splashed back on their faces quicker than they could get it down knows about this. You can mix up hamburger with some mashed potatoes, and a vegetable they detest, and, by golly, they'll chew that all and everything goes down except the vegetable they detest. And that comes right out again. We wouldn't be able to have such a good filing system in our mouths. We'd say "Oh, well, what's the difference, I'll just swallow it with one gulp and it'll be down." Not the children. They really can develop this sense very, very well.

We have some of our children who do not have good visual perception, and they're never going to have it. These are our blind children, or our sightless children, who have to develop their other senses with a greater skill than the one that they are deficient in. So we find that many children will learn in their own ways.

But I just want to point out to you that the five senses are working together at the same time, and all of us develop one sense of perception a little bit better than the others. When we're busy diagnosing: "Does he have poor visual perception? Does he have poor auditory perception?" we kind of forget that he has taste, touch, and smell also. And then we start giving them various techniques of treating them–trying to establish visual perception or establish auditory perception. But the one thing that troubles me is we get hung up on just one percept, or type of disability, and we don't realize that they all have to be integrated to mean something in a learning process. In other words, if we are going to be using all of the Frostig materials for a child, might he then need to get through that, and go into another type of education material that would take him through the next step. I just happened to pick Frostig, not because I have anything against Frostig material.

Now, if you're going to find out how this is so, how these senses become integrated, you really have to know a little bit about how the nervous system develops itself. And if you can just bear with me a little bit on *neuroanatomy,* I think it's easier to know that we have different parts to support the brain and the spinal cord.

We have the skeletal parts, the bone parts, that we call the *protective and supportive* part of the nervous system. And then we have the *vascular* part, the blood vessels, which

bring nutrition and sugar, or glucose, and oxygen to the nervous system. And then we have the *ventricular* part which is the irrigation system. In other words, our brain and our spinal cord has to be kept moist. Believe it or not, all of you right now have a brain that's breathing. It's about the consistency of jello that's congealed, with blood vessels over it, and then it has fl··· on the inside. This fluid is formed at the rate of ten drops a minute in our ventricular system–they're like lakes inside your brain–comes out the back, goes over the top of the brain, and washes it, so to speak. And then it comes out by way of your kidneys.

Now, in our supportive structures, you have to have a skull to hold the brain inside. You have to have your vertebrae to hold your neck up, and you have to have the vertebrae for the rest of your spine all the way down to your coccyx.

Now, this is general information. I don't think you need all of the details of how this works, but I thought I would like to just give you an idea of your anatomy.

I'm sure my neuroanatomy professor would turn over, with horror, at my description of neuroanatomy. But I feel you have to use functional neuroanatomy. What good is knowing all the little blood vessels and all of the other things, if you don't know how you can use it when you get finished. So I like to think of my fist and my wrist as representing the brain stem, and also representing the involuntary movements. And, then, if you take your other hand and you put it over like an umbrella, this represents your *cerebral cortex,* or your thinking cells. There are six layers of thinking cells in your cerebral cortex.

Now we know that if you see something, if you hear something, if you touch something, it has to go into your nervous system and be directed to the proper part of your cerebrum, or your thinking cortex, to be able to know what you're doing. For instance, your hand gets on a hot pot, it comes off fast. You hadn't thought about it. It's an automatic reflex. But then a few seconds later you say "I've burned myself!" And next you say, "It hurts!" And the next thing is, "What do I do about it?" Then you think of all your first-aid courses, do I put it in water, or do I run first for the Unguentine, or do I have any other favorite recipe or treatment to get it better?

If we had the nervous system of an earthworm, we would just function in segments, and part of us could be taken off at any level and we'd proceed again. I think one of the most interesting things I ever did in college was to dissect the nervous system of an earthworm. You can make this worm go on in segments. With the human you cannot. We're an integrated organism. We have to have a certain kind of rhythm and synchronous movement, that is the learned function, in order to get the proper response.

In terms of our thinking cells in our cerebrum, these cells are made up of protein, and when one sensory impulse, or request, if you will, gets to them, these membranes are supposed to hold back any other requests until you get a motor response. Some of our children, as I'll describe to you, later, have membranes that you feel have holes in them. But they don't. There are times when their nervous system is bombarded with sensory impulses, and the brain gets confused. It doesn't know how to respond to it. If you compare this to an electrical circuit, it's just as if you're putting too many appliances on one fuse. You're either going to blow the appliance or blow the fuse, and then you have to stop and start all over again.

Now, what difference does this make to an educator who, you know, just knows you've got this little body there and you've got to start teaching. Well I think it's good to know that there are certain parts of the brain that do certain things. If you think of the cerebrum–this is the thinking cortex that you have in the front here, your frontal lobe–these are the largest lobes you have, and they do not start to develop their really good function until you are eight years old. This is the part of the brain that controls personality and movement.

And then we have a very small lobe called the *parietal lobe,* and this controls the

sensory area, the skin. When we're doing a neurological examination, depending upon your sensation with our pin–you know that nasty pin we people use on you–we can tell whether your sensation is all right all the way down the track, and whether you're having any difficulties in the brain itself.

Then we have the *occipital cortex,* which I told you about before, on visual perception, and this is visual, or vision, if you will. And we have the *temporal lobe* that comes in here, right along by your ear. This has to do with personality, but it also has to do with hearing. Now, all of these lobes come in pairs. You've got two pairs of frontal lobes, two pairs of temporal lobes, two pairs of parietal lobes, two pairs of occipital lobes. And when you divide this up into five major areas, you have three that would be involved with sensation, and one with motor control, and one with emotional reactions–that gives me five–and the others go along with various other functions of the body. But if you know that you have different areas for this, I think it's important.

One thing we haven't found out yet is what particular part of the cerebrum is our concept formation part and which is our symbol formation part. And I want to know where is the *goddam-it-to-hell* part, because you take some children who can't say another word and they can say *goddam-it-to-hell* loud and clear.

The reason I feel there is an area that controls this, is that you can take a person with a stroke of their dominant hemisphere, and they can't speak, and yet they understand what you're saying to them. And if they get angry enough or frustrated enough–and it can be the nicest little old lady who never said a nasty word in her whole life–she'll come out loud and clear, so I think we must have a part of the brain that learns this, but we don't know just where it is yet. If I do any of this in the churches, I always say that maybe in their religious training they learned about God, they learned about hell, they learned about damn, and that that was a learned function in some part of the brain, but I don't know which part it is. Anyway, there is a part that seems to know this, and I don't think it comes just from the speech area alone.

Now, we have this wonderful thing, we have it all there anatomically, but now we have to develop its function. How are we going to get the messages up there so that we can use them?

Well, this is where the most exciting part comes, I think. As physicians it's only in the last ten years that we are learning a little bit more about the functioning of the brain itself, other than which is the area for walking, which is the area for talking, which is the area for vision, which is the area for hearing, which is the area for speech. We're learning that a lot goes on in our nervous system over which we have no control. But we're learning through chemistry that we can change it.

So, when you burn your hand, it will pull away, and that means that you have had a muscle reflex at a spinal level that takes it away. Meanwhile you also have another impulse that goes up your spine that takes it to the brain stem and the brain stem is where your blood pressure rises from–although it can also rise from your kidneys–where your breathing starts, where your heart rate is; and all of this is involuntary. You're not really aware that your heart is beating, unless it's beating too hard, or unless a very lovely mini-skirt has passed by with a good shape in it. It's done involuntarily.

Also, in this area is your conscious level–whether you're asleep or awake comes out of this area. Now, when you have messages coming in, especially the burns, then it has to be transmitted to what we call the *thalamus.*

And the thalamus is where the integrating of all the senses comes in. Also, you get all your sensory impulses coming in here that have to be integrated and then sorted out as to which direction do they take. Do they just come to here and then come back as a response, or do they go up farther into the thinking lobes of the brain. And then we have what we call the *hypo-thalamus,* which is a very, very important part of our anatomy. And then we go up to the lobes that come along on top.

But adding to this, we have what we call *basal ganglia,* on either side, that control our involuntary movements. In other words, if you go to reach for a pencil, and you have trouble with your basal ganglia, you may have trouble picking it up. We have to differentiate is that an involuntary movement over which you have no control, or is it an *in tension tremor,* is it something because you're nervous, because you're worried. You know, some of us, if we get excited or worried, our hands shake, and they say, well don't have them on the serving committee for the coffee, because the coffee will spill out of the cups. But this is an important part.

Then we also have another part in this same area that controls our balance and our balance is very important as you so well know. Because if you find that people have a degenerating type of nervous disorder that's affecting the balance and they stagger, you know, as they're going through the door, most people would say, "Look at that souse, and in the middle of the day, wouldn't you think he'd stay home in bed until he slept it off!" We have a job convincing our people with neurological problems like this to use a cane. As soon as they bring a cane and use it they no longer look drunk. If their nervous system is such that their balance mechanism is off, we try to convince them to use a cane, because people will step aside, and not try to knock them over.

Just like if you have a child that has cerebral palsy, and has trouble with his foot, and if he wears a brace, most people will say, "Aha, he's not walking right because he has something on, he's wearing a brace, there's something wrong with his foot." That doesn't mean they know what the answer is.

If a person is hard of hearing, people will many times mistake them to be stupid, rather than realize that they're hard of hearing. Because if you see them with a hearing aid you are more apt to shout a little louder, and look them in the eye to be sure they heard you. Whereas if you just don't think they're interested, or they're not getting it, you're not so apt to make the effort.

So your impulses are coming up, and they're going right through and being integrated through the part of the brain that perceives, and then you get the motor response back out. This is where education, I think, has become so important. You know if we don't expose our kiddies to learn things that they can learn by doing and repeating, we're not developing their nervous system as it should be developed.

But then we have another set up going on, over which we have no control, and that's what we call the *autonomic nervous system.* And this is the one that controls your hunger, your alarm reaction, whether you need to go to the bathroom, and so on. And this, of course, is not usually under your control, although you do learn social graces that make you become alerted to the notices the autonomic system tells you. In other words it tells you when your bladder is getting full and you must go take care of it. It tells you when you're a little bit afraid. It's a really good alarm system.

Then, added to this, we have the glands and your metabolism, which is your thyroid, your pituitary, and so on.

You know, you read in the literature that somebody is all gung ho on metabolism, as it causes learning disorders. Then you've got another one who is all gung ho on the fact that we have brain damage as the only reason for learning disorders. And then you have somebody else gung ho on something else. You know, everyone who is interested in any particular part of this whole child will have something to offer. And I hope, this afternoon, what we're going to be able to do is to show how even in our nervous system we have a multiplicity of function, but we have to have an interdisciplinary communication in our own selves to get the right answer.

Now, if this is so in our nervous system, then certainly it must be so with everyone who is working with a child, from their own particular discipline. Now, the one interesting thing about this is timing and age. We get very upset with our teenagers because we feel that they are not conforming or they're having many problems. But I think the

problem that we kind of ignore, or we forget, as we get older ourselves, is their biggest problem in their teens is their love chemistry. You know, all of their glands get moving and giving them feelings they haven't had before. And they are wondering is it right to feel this way or is it wrong to feel this way? And they're not so sure they can share it with the older people that they think have never gone through this before.

But, actually, human nature is such that we all go through the same things pretty much at the same rate of speed when it comes to our love chemistry, and so on. How we react to them is conditioned by our own successes or failures.

I think I've given enough of this. If I can just give you the feeling that we have a wonderful thing in human anatomy, and human function. We really don't know how to improve on nature yet, and we're just really learning how much goes on in the development of a nervous system of a child. And we're just exploring how we can play a role in this, and whether it can be an effective one or not. The normal development of the central nervous system really depends on an adequate structure of the whole nervous system itself, and a suitable human climate. They have to be in a climate where they're going to get nutrition, where they're going to get stimulation, where they're with people with whom they can respond. And this is what's really going to help in normal development.

I feel the failure of adequate stimulation after birth interferes with the normal development of the central nervous system. This is not just my feeling alone, it's the feeling of everyone who is working with children. If a child is allowed to just stay in a crib without any stimuli, without somebody cuddling him, without somebody talking to him, then he is not going to develop his nervous system as fast as a child who gets a lot of attention. And we know that emotional and neurotic difficulties and differences are caused by environmental factors, and we will get into that in our next session.

SEMANTICS OF SPECIAL EDUCATION

Dr. Catherine E. Spears

We decided we would call this section "Semantics of Special Education," because that is the closest to what we're going to discuss. The reason we get involved in this is because, in the last decade, there has been much legislation trying to care for, or provide funds for, or provide some type of educational technique for any and every type of learning disability. And we don't have any criteria, really, as to what is the disability: what is the component problem, what is the base problem, and how do we remedy it?

So I thought it would be kind of fun to consider the words we use. Let's just have some fun with this, and let's not take this, please, as a critical survey of anybody's discipline. Now the one thing that's not funny, though, is this. You know we have all of the various disciplines giving equally as many diagnoses, with no communication about what they feel about this little round wheel that we're dealing with. And we have all the teams with multi-disciplinary efforts, without an inter-disciplinary coordination. So we have many teams all examining children. But I have yet to see the child in that same school year get the benefit of what the team decided.

This troubles me because these children are growing in leaps and bounds. They're not waiting, and they don't care whether their school record says that they are this, that, the other thing, and that if their mother and father looked at them differently they would do something else. They don't care about that. They're learning, and learning fast. So I really feel that confusion arises in defining the difficulty, and here's where I'm going to have fun.

Now it depends upon the discipline and the type of background that this disciplined person has had as to what the emphasis is going to be in the diagnosis.

Now you know when our Beatleston Act first came out, and we needed special services for the retarded child, it was the psychologist who had the say as to whether or not the child was retarded, emotionally disturbed, or anything else. But we have two kinds of psychologists. We have the psychologists who are analytically oriented, who feel that if you didn't breast-feed the baby–and I'm exaggerating a little bit now, just bear with me –that this baby would always feel rejected by the parents, you see. This is what I call the *analytical psychologist.* And then you have the *organicist*–the one who feels that there is something lacking in the nervous system or in the psyche or in the intellectual makeup that is causing all the problem. Of course, I side with that one, because I'm the type that thinks that there is a structural defect, you see, but also functional. So then you get all these children diagnosed either as retarded or not retarded, as emotionally disturbed or not emotionally disturbed, as culturally deprived, etc.

So then we go on and say, "Well, we need another opinion. First we'll see what do their eyes do?" So then you send them to the opthalmologist, who's the M.D. eye man,

who says, "There's nothing wrong with this child's eyes that would cause him to have trouble in reading. It must be you educators. You know you don't teach the children the way I was taught when I went to school."

So then everybody gets their back up and they say, "Don't send any more of the kids to him, he's against educators. He doesn't tell us anything." And actually what he's telling you is whether there is a disease process in the eye, and in this case, there isn't. So then you go to the optometrist, who does a different examination. He's testing the function of the eye–not whether it's diseased, but how does it track–do the eyes go together to the left side of the page, go across the page, and then come back. This is what we call tracking.

And then, because of necessity, you get into the field of neurological organization–how to train the eyes to track, how to train the eyes to fuse–and this, you know, is the big debate between the opthalmologist and the optometrist. And it's still going on, by the way.

So then you go ahead and say, "Well, we're seeing a lot of children who are not retarded, but they have a learning problem, so we need a neurological examination." So you send them to a neurologist. If you have the neurologist who is trained in adults, and now does children, he doesn't see anything about this perception bit. "What do you mean, perception? There's no such thing!" you see. But if you send him to a pediatric neurologist, who trained in pediatrics, first, and then did neurology of children, he'll see perceptual problems, you see.

But, again, you're seeing children, and you're not seeing them as little adults, because as adults there are many other things that are going on that are not going on in childhood. This is an organism that is developing as a child. He has not disintegrated as an adult. This is different.

And also the way they see things is so different. And if you've ever had the experience–and I'm sure you all have–of just being your own spontaneous self, with a little enthusiastic child whose eyes get real big when you can kid them–not teasing them, kid them–and get them into a situation, that can be fun. You know you feel young yourself. You really feel like the world is beautiful, the sun is shining, and so on. And this is a situation that many doctors cannot do. They can't get down on the floor and examine the children if that's where they can be examined better, there, than on an examining table. So this is the difference, I think. It's whoever is able to reach this child who is going to be able to work with him.

Well, then, we went on and we had the remedial teacher, or the remedial reading person. And then we went from there to the learning disability specialist. And now we have the learning disability teacher consultant, who no longer has time to go into the classroom to teach the teacher how to teach the children, you know. You just move up and then who suffers? The child is the one who is suffering.

So then you say, "Well, you know, we expect our teachers to do as much in the same school day as they always did, but we give them more tests to do, we give them more paper work to do, so they don't have time to teach anymore." This is my one big complaint. I just feel nobody has time to be spontaneous any more–to do what they really feel is necessary for that particular group of children.

So then you send them off to the psychiatrist. The psychiatrists are of two kinds–they are like the psychologists–you have the analytical psychiatrist and you have the organicist. So, then, if you have a psychologist who is an organicist on your team, and you have a psychiatrist who is an analyst, you really have a conflict, so that they don't come to a certain agreement, you see. Or if you have two of the same background, but all the other educators and disciplines disagree with them, you're still at a conflict.

So then you wonder if you should get everybody who has the same feeling, and then we'll all be doing something and nobody will disagree with us.

And then how do you go on from this. Well then we have the speech correctionist, versus the speech pathologist. Now the speech correctionist is the one who teaches you how to pronounce your "s's" your "th's" and your "f's." So you're not saying "frain," "fruck," and "frolley," instead of "train," "truck," and "trolley," you see. But your speech pathologist is the one who is interested in language–how do you use your words to express a thought? And can you use this to express the proper thought? And do you know when to use it appropriately? So we run this battle again. And then you have the speech pathologist who feels, "If I can only get them at six months of age, not four years of age, I can teach them language."

So then we go from there. You have the motivation of the child and you have the motivation of the parents. And they don't always agree, as you find out. A child may be motivated to do something so that he can get a reward that makes him feel a good person or a big person. But you have the motivation of parents, who want this child to reach or function up to his potential before he's ready–in other words you have to be thirty years old before you're born now, because you don't have time to grow in between. And this is where I feel the motivation changes. If we're just motivated to let everybody have a chance to do their thing, as the new terms go, at the time that it's proper and correct, build them up to it, I think then we're going to have a healthier group of people.

And then we have *opportunity*. And I've had the feeling that we're running into a little trouble–at least I seem to see this in the schools that I go to–where we'll have a teacher who is very excited about doing something different for her particular class, and then she runs into the rigidity of administration, where administration says that we've never done this before, or we don't have the money–and rightfully so. I mean, I know that there are money things you have to think about, too. But then the spontaneity and the opportunity seems to me to be lost.

And if we could just get this opportunity, if we can get out and tell all our taxpayers, sure we need to get our school budget passed this year. I'm out there on a soapbox every year our school budget comes up, and, fortunately, we've gotten it passed. But you have to sell something. You have to sell to get it passed. And then if you can sell to your parents that you are the specialists in education. Sure, you'll share with them, but you're the specialists in education, not them. Even if they went to school, they are still not the specialists in education. I think this is what we have to be able to get across.

Now we come to materials. One school will use the Frostig materials. Another school will use the Winterhaven materials. Another one will use the Gillingham, or Open Court, or ICPA. And you wonder, are we getting all that is necessary for the multiple needs of the kiddies we have? Not everybody is going to benefit from Frostig, or from Winterhaven, but maybe they could benefit from a little bit of each, at the time they need it most. You know, can you take something out of each type of teaching material that will be specific for the child that you have?

Now coming down and driving down in the car today, I heard the man who just wrote the book, *Social Contract,* Robert Ardrey, discussing genetics. And he was saying the one thing he's going to do before he dies–the one thing he has to convince educators, is that we're not all created equal. When we have 22 children in a classroom, perhaps only one out of that 22 really has the personality to become president of the United States, and the other 21 wouldn't be able to make this role. But also, not all of the other 21 should go to college either. We should not have to be making all of our children fit into a solid mold that only goes one way, when they, perhaps, could go in other directions and have a fulfilling life.

This comes back to one of the first lectures I ever gave when I came into New Jersey, when I was young and fresh. I'm a little fresh, now, but not as fresh as I was then. The group had asked me to come and talk about epilepsy and seizures in children. At that

time in New Jersey if you had more than two seizures you were not allowed in the normal classroom. You know we have all of the children who have seizures back in the classrooms, now, except those who have emotional difficulties that make them not containable in a classroom, and this is a big step since 1952 when I first came to New Jersey. At that time I made the fresh comment that I would hate to think in twenty years that everybody would be going to college, and I wouldn't have anybody who could make a pair of shoes I would like to wear, or a suit I'd like to wear, or bake some bread that I haven't baked since I was a little girl, because everybody is so busy going to college. And, you know, it's not quite twenty years, but aren't we about there now, where the emphasis has been on college so much that it's not really a wonderful thing to be a good carpenter, to be a good plumber, to be a good shoemaker, to be a good house cleaner, etc., which should have just as much stature as going to college. And aren't we trying to put too many people into college who do not belong there, and then we'll have emotional breakdowns because they don't belong there.

I just wonder if this is what we're doing, and if we have to take another look at our goals for some of our kiddies, and maybe we have to sell parents, because parents want it. It doesn't mean the children want it. But parents want it.

Well now, when it comes back to semantics, I thought you'd like to know we've gone from retardation, to brain damage, to brain injury, to minimal brain damage, to minimal cerebral dysfunctioning, to dysacousis, hard neurological signs, soft neurological signs, emotionally disturbed, socially maladjusted–it's all in the legislation. Yes sir, we've got all these fancy, various medical diagnoses.

But did you know of *dyslexia*–we have had this word for a long time, and as of May when I looked this up–we had eighty different terms in the literature meaning *dyslexia.* Now, it depends upon which word you use, whether you're talking about dyslexia. So I thought you would bear with me and let me go along and tell you what I think dyslexia is. You know, there's nothing like having a non-educator tell you an educational diagnosis. All right? There are three different types or groups of dyslexia. There is a primary dyslexia, which really is a composite of a developmental process or difficulty that's genetically determined. It runs in families. It's familial in a person who has normal intelligence, but cannot form a symbol that makes them read. And you'll find this–runs in families. That to me is the time you should call it a dyslexia. When this child has had every ability or chance to develop all the percepts, but cannot create a symbol that makes them read.

Then there's the secondary dyslexias whose causes are what I call *endogenous.* In other words, they can't read because they're intellectually limited. They can't read because they have out-and-out severe brain damage that's interfering with the development of reading. Or some of them can't read because they have minimal cerebral dysfunctioning, regardless of the cause.

And then there's the third, or the *tertiary* type of dyslexia, which I call *exogenous.* And this one I feel is caused–and this is not just my feeling, I've gotten this from the literature too–is due to poor teaching, to cultural deprivation, to emotional disturbance, to poor family background, or poor family situations, and to poor motivation, or poor opportunity factors. If they've never had a book in the house, how can they read? So I feel that if we are going to use the diagnosis, or the term, dyslexia, let us make it the person in whom it's a genetic thing that they can't read, and it runs down through the family.

Now if we have all of these different problems, or different diagnoses, what do we have to be cautious about? I put down several things that I felt we had to be cautious about, and one is that we have to be sure that the tests have meaning in terms of the child's actual real life learning. You know, we do so many tests, but if the child has never been exposed to this kind of thing that we're testing, how do we expect him to know the

answers? He can't.

Also, we find many children are given psychological testing before they have language, and they have to be tested by their verbal ability. And they don't have any. So you have to give them a test that shows their performance, and isn't trying to test the verbal ability that they don't have. Many people give a WISC to children under seven or under eight, but the standards for that test were all set for children eight-years-old and older. I think we have to be specific: What are we testing? Are we using the proper test to find out what we need?

Then I think we have to determine the capacity to learn, this child's ability to learn, the ability to deal with letters and words as symbols, and the ability to integrate meaningful written materials. This is so important.

And at some time we have to determine whether we work through the disability, or work around it. Because if the child has a disability, say visual perception, he certainly, if his auditory perception is all right, can listen and learn through his ears, and can give you verbal responses back instead of having to put them on paper. Because if he's not reading he's not going to be able to write, but he certainly could learn and be tested, verbally. If you have a child who has good visual perception and poor auditory perception, then hopefully, you're going to teach him through his eyes.

And, then, I think there's a time in every child's education when we have to figure out is the child out of gear, or is it the school? Is the school program only for the exceptionally bright child? Or is the school program for the exceptionally slow child, which is as just as detrimental to the smart child as it is to the middle child, or the middle learning child. I think we have to take a look at this and not just say, "Oh, blame it on the child."

And then we have to see is there a need for integration of inter-disciplinary talent. If you have them all, who is the boss? Who says this is the problem. You know, somebody has to pull it together and come up with the answer.

And we need communication of two types. One is semantics, which we've been going over this afternoon. And the other is *phatic,* the Greek word that means "to show." It comes from *phasis.* If you can say a lot of words, and the person doesn't understand what you're saying, then maybe you can show them. You know, the children turn out to be

our best psychologists, in that they can tell whether you mean what your lips say by watching your eyes. Because if somebody smiles at them, and has no laughter in his eyes, the children take this as rejection, or criticism, or a sneer. We adults are not so apt to do this, you know. We'll just say, "Oh, a bad day for that one," or something like that. But the children do communicate both by semantics and by phatic communication.

Another important thing in my opinion is that timing is necessary. If you bring in a solution or a situation and the timing isn't correct it's not going to work out. Now, many times what I find in my private office is this. A mother will come in and say, "You know, I've had it with the school."

And I'll say, "What's wrong? You know, they're only interested in your child."

"Well let me tell you what my day has been. We got up late, the alarm didn't go off. My husband almost missed the train, so I had to rush him off to the station to get him on the train which he just made without his breakfast. Meanwhile the children are hungry. I get them fed. The refrigerator goes off. I forgot to buy the eggs. I have to get the clothes to the cleaners. I have to get the wash done, and the machine went off. The dryer isn't any better. And then I thought, well, I'll get a chance, somehow I'll get caught up during the day. And I get a call from school. 'Please come get Johnny. He's suspended from school.' And that's the rest of my day. And then I find out at the end of the day, when I need my help in the zero hour with my built in baby-sitter, that the television doesn't work. And then they expect me to like everything."

Now, what's happening? It wasn't the fact that the school suspended Johnny, or said he's not working up to his potential, and that was the reason that she had the conference. It's the timing. Everything just seemed not to go right. And, of course, we can't all make it right. I know this.

But if we could just not put parents on the defensive about their children not working up to their potential. I'd really feel very happy if you could go away feeling that you can give him time. I mean, the one panic button that gets pushed with parents, is if the school tells them Johnny is not working up to his potential. Why isn't he working up to his potential? He's got an I.Q. of 147 and he's in the lowest reading group in his class. They're fairly upset by this.

So my prize comment, which doesn't make me very popular is, "Well, why are you so worried? I don't care if he doesn't reach his potential until he's an old man."

"Oh, but Dr. Spears, you don't understand."

I say, "Yes I do. I don't care if he's not reaching his potential as long as he's learning at the rate that he can do it comfortably, as long as he's becoming a happy person within himself, and as long as he's getting some criteria by which he fits into our society and he finds himself."

I then go on to say, "You know, we have thousands of nervous system cells that never get used in our whole life. We have them as our spares in case we have minimal cerebral dysfunctioning that we didn't know about, we can then use these other cells."

Now this, then, comes down to my comment: isn't it better to describe the child's needs without giving him all of these fancy diagnoses? Can't we describe the child as we see him in terms and adjectives that we know everybody is familiar with? You know, do we have to give them such jazzy diagnoses? Granted we have to do it to get funds back to provide the special educational techniques, but I think now we're at the stage of over-diagnosing or perhaps misdiagnosing so that our children really are not getting the full benefit of just being normal children who between certain ages need visual perceptual training, and other times need other things. Now, this is according to neurological organization: Between the ages of three and five, the emphasis should be on language, emotional development, and perceptual stimulation. And between five and six the stress can be reading readiness. This is on the child that doesn't have an obvious problem. Between six and seven you are developing their visual perception. In other words, how they see things

and how they can write them or put them on paper. And between the ages of seven and eight is when your auditory perception chronologically is being developed. This is, now, the nervous system milestones. This is three to five, this is five to six, six to seven, and seven to eight, according to the maturation of the nervous system.

You're not going to be teaching them how to be a public speaker if they haven't developed the ability to speak.

You're not going to put them into places or situations where they are going to get failure before they ever get success. For instance, if you have a child who has a great deal of trouble with arithmetic, and, every day, out of ten problems, she gets eight wrong, it's always minus eight. I'd like her sometimes to just have a plus two, or a plus three, or a plus four. If you read our magazines today, especially the ladies' magazines, they always have a medical article that says, "Have you done this with your child? If you haven't then you have deprived your child of this, that, or the other thing." And, immediately, it puts mothers on the defensive, instead of saying, "Gee, you've done a good job."

Let's emphasize the positive thing. Like, you hear on the colleges about the children who are against the administration or against the establishment. But you don't hear about the kids who joined together and formed a patrol to guard their buildings so they wouldn't be set on fire by people who weren't on the campus. Or who would go to administration and say, "Help us, we want to take our exams, we don't want to go home and not take them." We don't get those.

You see, the emphasis is on the negative thing. And, being an optimist, I think it should be on the positive thing and not just always on the negative. Now that doesn't mean you disregard the negative, you do have to know these things.

Coming back to semantics. Semantics, to me, is a type of communication that insures that we are all saying the same thing when we say *neurological impairment.* And I'll stop there, because that's what I want to get into with you in the next hour. What is neurological impairment from my point of view?

NEUROLOGICAL IMPAIRMENT

Dr. Catherine E. Spears

Now, if you go to the last page of our notes, where it says communication on the top, in the inner circle you can mark *intrinsic.* And I'll explain it to you in a minute. Then the next circle is *extrinsic.* And the third circle is *environmental.* And you can call these all *factors.*

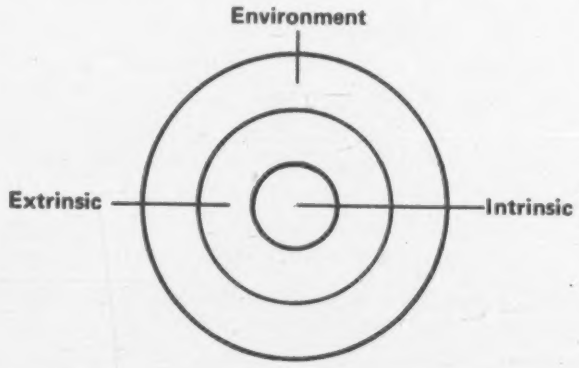


Figure 1

Now, *intrinsic* means the *genetics* or the *genes* that the child has. He's made up of a composite of genes and chromosomes, personality characteristics, hormonal characteristics, etc., that make his own person. And you can have, in a family, children that seem alike but it would be one in a trillion in a family that would have the same exact composite chemistry, genetic composite makeup unless they were identical twins. Parents will say, "But your brother Johnny, he did so well and was no trouble, why can't you do as well?"

But everyone has a different genetic component to start their nervous system and to start their whole body.

Now, *extrinsic factors* mean heart, lungs, liver, all the different organs of the body. If all of these have been functioning fine all your life, you're going to be able to get the proper nutrition, the proper amount of protein, proper amount of sugar or glucose, and oxygen into the nervous system to help it develop. But if you have a child who has a

chronic heart condition, they're not going to be able to be nutritionally as healthy and ready for various occupations as a child who doesn't. If you have a child who has needed exchange transfusions in the newborn period because of severe jaundice, this child is going to have some deficits–even though it may be spotty–in the nervous system. There was a time when this nervous system did not get enough oxygen, glucose and protein.

Now the child who is hungry, or who doesn't get protein, his stomach is really going. He doesn't have enough for good growth or maturation. And you can't expect to teach a child who is hungry in your classroom, because his autonomic nervous system says, "feed me, feed me, feed me," and you can't expect his intellectual curiosity to be baited. These children are not thirsty for knowledge, when they are thirsty for food. And if they get a lot of carbohydrates, these are filling, but they don't give them enough protein, which the nervous system needs to make it mature. Because these thinking cell membranes, that I told you about before, are made up of protein–they're not made up of sugar. You have your sugar inside the cells for energy and functioning, and oxygen, but you need the protein to keep it contained.

So, again, if you get a history of a child having many illnesses that are causing this youngster not to mature at the normal rate of speed, then, you're going to have a delay in learning also. Many times, for children who have a history of chronic illness, we have been doing X-rays on their wrist for bone-age, and this gives us an idea of their maturational age. This is delayed when they have had chronic illness. And it's interesting that, many times, in the presence of normal intelligence, your bone-age is the same as your functioning mental age, and not the same as your chronological age. And this is all, again, affecting the ability of the child to learn–how are they physically?

Now you have on top of that the environment, or the environmental factors. Has this child been exposed to good health, or good home, good school, good neighborhood, opportunity–all of this comes in. So that you just can't take this round wheel that I described before and say everything is going to be fine. There are all these factors–your genetic factor, your health, and what does the environment do for you or against you. So that we have to evaluate which is the important part in the child's learning disability. Is there something we can do to increase his health, or improve his health? This is where, hopefully, the medical people would come in, because if you have a healthy child, they are more receptive to any type of teaching or exposure that you give them. Sometimes they are so receptive that they become a nuisance. You know, they want to know why, why, why, why. And I don't need to tell you people that the only way to turn that off is to ask them why do they ask, right back. And all of a sudden they don't know why they ask so then they decide they're not going to ask you why any more. You learn that with your own children eventually, I think.

Now, we can do chromosomal studies and find out whether or not the child has the normal amount of chromosomes. We do this in the Mongoloids. This has been the most exciting part of chromosomal studies. In the Mongoloids we can tell what type of Mongoloid they are. We have three different types. We can also reassure the mother that she's not going to have another Mongoloid. I have two families in my practice–one had four Mongoloids and the other had three–and these were all conceived before the days of doing chromosomal studies and we find that they have what we call a translocation in the genes, so that every child of that union would be Mongoloid. And this is a heartbreak. We are also just now finding out that there is a defect in the mother's metabolism at the time of conception that can play a role in the Mongoloid child, and that is a deficiency in Vitamin B-6.

We are giving Vitamin B-6 in high doses to the Mongoloid children to make their tongue thinner and make their muscle tone more firm. We don't know, and won't know for a while, whether or not this will increase their intellectual ability, or intellectual quotient. Now this is a chemical thing that we're finding out, and, of course, I th ık it's

real exciting because I have the reputation that if she doesn't know what to give you she gives you B-6, you see. And now I can say technically there's a reason. We now find that there are five different chemical problems in children that are deficient in B-6.

Participant: Is there a great amount of difference between B-6 and B-12?

Dr. Spears: B-12 is the factor necessary to form red blood cells, to have the combining power of your iron with your mechanism of forming red blood cells to make for good hemoglobin. You know, so that you're not anemic. Now B-6 is an enzyme that works to make you absorb the protein you eat and deposit it in the nervous system.

But we are finding out many things, you see, chemically that can give a reason or a cause for why a child is not learning. Again, you know, it's whichever one is your specialty. The psychiatrist is interested in environment, you know, and learning, etc. The internist and the pediatrician are interested in the extrinsic causes, the heart, the lungs. And then the geneticists are interested in the genes and the chromosomes.

But there has to be a common get-together of all of this information, so that you can say, well, now, what is the main factor that's causing this child not to learn at the same speed that you think he should be able to. It's fascinating–something like crossword puzzles–to take a history, and then you try to put all these parts together, and you come up with an answer.

Well, now, supposing you know all this on this particular child, but he's having trouble learning. And you get back a note, hopefully from the doctor, that says this child has neurological impairment, and needs supplemental tutoring, one hour a day, five days a week. And then depending on whichever lecture he heard that week, he'll say whether he needs Frostig or what-not.

But, anyway, you have the diagnosis of neurological impairment. Now you're going to say, what kind, what is it, what are we looking at? If your child who is neurologically impaired has cerebral palsy, that means that the part of the brain that controls motor function and movement is defective in some way. So what are you going to do with this child in the learning situation? Aside from a coordination of going up and down stairs, because that's the part of the body that's involved, the biggest problem will be in writing and drawing skills. You'll find a child with a hand that is spastic will hold on to that pencil like it's going out of style. Or they'll have three fingers on the pencil, and they'll have a great deal of trouble in getting a smooth rhythm. When I was in school we used to do the Palmer method, you know, get a certificate every year for good penmanship. You know, it had its virtue, in that it gave you a freedom of movement, a fluidity of movement, if that's the term I want to use, that some of these children don't have. But if you put a very thick pencil into a spastic hand, you break up the spasm, so the child then can move his arm and make his hand write. But if they have a very thin one it increases the spasm. So their biggest difficulty in the school, aside from playing ball, would be writing and drawing difficulty.

Next we have convulsive disorders. Now some people know of these youngsters who have epilepsy. I don't use the term epilepsy, because there's so much outdated legislation that it has a great amount of stigma attached to it. And, now, with the pills and drugs, we can cure so many of these features that by the time these people are adults they shouldn't have to still carry the label that is no longer pertinent to their disability. Now what difference does this make in a classroom? It makes difficulty in that there is a loss of learning. The child is having momentary changes of attention, for instance in a *petit mal*, where they would just have a period of staring and then they can take on where they left off. But they would then have an interruption of attention span, not only not be able to have heard what the teacher said for those few seconds, they had a lapse of attention, also, which means that if a teacher was teaching them a problem that had four steps to it and they heard step one, but didn't hear two and three, and heard four, and one and four weren't related, they wouldn't have it. She might go on to step five, six, seven, and eight.

They'd hear five and six, wouldn't hear seven, and hear eight. They still wouldn't have it. And these would be the children you'd be suspicious of, who couldn't assume later on the first four steps and go on to step five, or assume the first eight steps and go on to step nine. They'd have to go back and start at one all over again, you see, one, two, three, four, five, six, seven, eight, and so on.

And, also, not only would they have a lapse of attention, they'd have an interruption in their train of thought. If they're putting it on paper, you might get the front part of a sentence and the end, but not know what the middle is. Or they might start in the middle and not give you the beginning, so that you'd have an interruption in their thoughts and this would interfere with learning and teaching.

The child who has a *grand mal,* or major seizure—everybody knows those, they call them convulsions. But these are all convulsions and you know that they're not going to learn. Nobody tries to teach them when they're in a *grand mal* seizure. You're only interested in getting the nurse there to get them out of the room.

But with a momentary lapse of attention, a *petit mal,* or what we call a "brief absence" which is even shorter than a *petit mal,* these children lose a lot in a day. Then they are called the "proverbial daydreamer," or "short attention span," or "they're in a world of their own." So, then, it depends upon which specialist you go to who gives you the diagnosis. You see, if they're in a world of their own and you go to a psychiatrist then, you know, they're really psychotic or emotionally disturbed. If they are daydreaming, it depends again whether you feel that they are having momentary lapses or whether or not they're just doing their normal amount of wool-gathering, because they are not being stimulated enough in the learning materials. But everybody does a certain amount of this. When we get to our ages and start having lapses of attention and interruption in thought, we just blame it on old age and not the fact that we have *petit mal.*

Petit mal is one of the most difficult of the seizure disorders to really bring under complete control. *Grand mal* is easier, even though it's more frightening. But we do try to make it so that at least most of their days are fine. Now if a teacher is aware that this child is having this difficulty and she's presenting something, or she's going to ask questions and she sees this—it's just as if a child would pull a shade down on him, if you're looking at their eyes, they're just not with it—and if a teacher is aware of this then she wouldn't ask him a question during that time, because he wouldn't hear it, but would wait until he came out, and then ask and he'd be able to answer.

This is very common in children. We figure one out of every two hundred boys have it, and there are girls too. We really feel it's connected with the male chemistry, but we don't know just what the connection is, because as adults, as they start into puberty and go on, it disappears, whether you give them medicine or not. So we really feel it's related to something in the male chemistry, but we don't know.

Then we have mental retardation, or pan-retardation. And that means a child that is slow to reach all of the developmental milestones in my circle, of physical coordination, intellectual growth, and social and emotional growth. Now we do know from many of the studies, that by four years of age you have developed fifty percent of your intellectual abilities. That doesn't mean that you're using it, but you can tell fifty percent of what your intellectual capacity is going to be. And that by second grade, eighty percent of your intellectual ability can be tested. So that you're going to know early which is the child that's going to fit into the over-all pan-retardation. That means all of the areas of perception may be involved or slowed down in development—speech, language, social development, emotional development—and these are the kiddies that are in our special education programs for the mentally retarded.

Then we have the hyper-kinetic child. And this is the one that's received so many articles in the literature, both in your journals for learning disabilities, as well as the *Ladies Home Journal,* as well as the other medical magazines that we have, too, where

you get all of the different names that I gave you before: minimal brain damage, minimal cerebral dysfunctioning, etc.

Actually, this is the one which should be thought of as the child who has normal intellectual ability, who has a compositive symptom which we call "soft sign," as opposed to hard neurological signs. You can tell the child with the spastic muscles, the balance, etc. That's a hard neurological sign. You can tell the child with a convulsion, most of the time. That's a hard neurological sign. The overall pan-retardation, this can be a hard neurological sign.

But the soft neurological signs come under the hyper-kinetic behavior syndrome. And what does that mean? That means you have a child that's hyper-active, going in all directions, motor-wise, you know? They can't sit still. They have to run. They have to jump. They have to skip. If they start running, they have no brakes, they can't stop at the end of the door. They just go plowing right through it, literally climbing up the wall, over the ceiling, and down the other wall. And this is where we get into the semantics of hyper-activity vs. hyper-distractability, and I'm told by the English majors that there's no such thing as hyper-distractability, it's really just distractability. But the children I see in my office are hyper-distractability. They're way past distractability, they're hyper.

But the question then comes up, which is causing the most trouble in the classroom? Is it the child with the hyper-motor activity, the hyper-activity? Or is it the child with the distractability who is not hyper-active? He can sit there, but he can't stick to a task, he has to keep shifting from one thing to another. That can be just as disconcerting, and hard on the teacher and the child, as the child who runs around all the time.

And then you have under here a short attention span. You have impulstivity—they do things impulsively, they don't stop to think about it. They're not uncoordinated, they're incoordinated—you know they just seem clumsy. They're not that bad, you know, but they bump into things, so they're really incoordinated. Whereas a C.P. is uncoordinated.

Now this is the group of kiddies that have real trouble with perception. They have poor integration and poor organization. You know it's just like they're going in all directions at the same time. Their thinking is this way, their arms are this way, their whole body is wiggling this way. And these are the children who would go into the classes for the neurologically impaired, or the perceptually handicapped.

You know, we have the pan-retarded in the special-ed classes for the retarded. We try to keep the children in the normal classroom, if it's only a seizure disorder. We put the cerebral palsied child in the normal classroom, unless they are so orthopedically handicapped that they need to be in the orthopedically handicapped class. And the hyper-kinetic you hope to keep in the normal classroom. But this child may have to be in a small classroom with six or eight children to a teacher, who can structure the classroom so that they are not being over-stimulated, and then this feeds into their hyper-activity.

Now, we do find some hyper-active children who are hyper-active not because of their nervous system, but because of emotional factors, or because of some metabolic factors, and then you have to figure out, do they need medication of do they need structure. But, again, we try to keep these children in as normal a classroom setting as possible with the help of perceptual training.

Now, we have language and communication disorders, and since the epidemic of German Measles in 1963-64, where the mothers got German Measles, we are running into more and more kiddies with language and communication disorders. These are the kiddies, some of them who are hard of hearing, some are deaf, and because of these two disabilities have trouble with language and with speech. And their needs are different also.

But the thing that we have to determine—these are all neurologically impaired children—what is the area of their greatest deficit that needs the help? We want to keep them in as normal a classroom situation as possible, but one that gives them the extra help in the area they need most.

Now, in this era of drugs, you know, everybody's worried and rightfully so, but most of the time you have parents who are worried, who say that I don't want to use a drug on my child to slow down his behavior because he might become a drug addict like the teenagers. My experience has been that the children who are on drugs—and when I put them on they're on it to stay for two to four years, if it's a convulsive disorder, or if it's a behavioral one, it's a year at least—they are so glad to get off pills they wouldn't even want to take an aspirin. And I now have them in my practice old enough to be teenagers going on to college. We discuss the drug picture. But again it's hard to convince parents, especially when many articles are written without too much medical-chemical background to give them the basis for saying what they're saying.

Medicine does play a role. Now how does it play a role? On our hyper-active child, or the hyper-kinetic child, who is both hyper-active and hyper-distractable, impulsive, etc., we do use two groups of drugs. We use the amphetamines or the speed drugs, as the teenagers call them. And it works in reverse on these children. Instead of making them feel high, like it does the teenagers or the adults, pep them up and make them feel like they've got oomph, it slows down the hyper-active child. Just like phenobarbital, in some children, will send them right up the wall, pep them up instead of slow them down, and it works this way in children. We also use—you've probably read a lot of the works on *ritalin*—we use it also for the hyper-kinetic child. I've been using ritalin more than the amphetamines, only because, if there is a prescription for amphetamines in the house, and there are older children there, you don't know whether they want to try it, because all of the information coming out is the children start on drugs depending upon how many drugs are in the home medicine closet.

You know, the pain killing drugs aren't thrown out when they're no longer used, you want to save them because you paid for them, and you might need them someday when you have a toothache. We all do this. But again, I'm not giving prescriptions unless this is actually what is necessary, and I'm only giving enough for the amount that I want the child to have. So that parents can keep a tab on how much is being used, and whether it's being taken.

We had this experience, which is a little off the subject, but I think funny, although not so funny when it happened. This was a mother who came in very upset and told me she didn't know what she was going to do with her daughter, because she hated her at the moment, and I said to her, "Why do you hate her?"

She said, "Well, I never thought it would happen to me. I've been on the birth control pills so that I wouldn't get pregnant, and I'm preganant."

I said, "Are you sure you've taken the pills?"

She said, "I took them faithfully, just the way the doctor told me, and I'm pregnant."

And I said, "Well, there are other ways of preventing conception, if this is what you're here for, you're not getting it from me. You go to the obstetrician and gynocologist and they'll fill you in."

But she said, "Wait, hear me out." She came home one day and found her daughter, who was babysitting, having intercourse with her boyfriend on the sofa. So she said to her, "Don't you know what this means? You'll get pregnant."

The daughter said, "Oh, no I won't." You know what's coming, don't you? "I've been taking your pills and putting saccharine in your pill box."

And this is a woman over forty who, had chosen not to have any more children. Now the reaction of the mother was she could literally have killed her. And you know you really couldn't blame this kind of rejection. But it gets a little scary, and this does happen, and I could give you a whole bunch of other ones, you know, that they come in and tell me about, but you never think, you just never think that this is going to happen when you make a prescription.

So I'm being very cautious about amphetamines, because the kids do know what it is,

and they do know of it as *speed.* With ritalin they haven't caught up to it as an anti-depressant. If they're very depressed it might make them feel better, but we're not going to tell them that. They'd rather shoot heroin, because then they can sit in a corner, and they can let the world go by, and they don't have to feel anything about it. At least this is what the teenagers tell me who are on drugs and are trying to get off.

So medicine does play a role. Vitamin B-6 certainly does play a role, because it's using an enzyme to make them absorb their protein. High protein diets, of course, are important but then we come into the economic factor, for some people, because protein is expensive. And then we have all the tranquilizers that many times have to be used in addition or in conjunction with ritalin, or with any of our other drugs. But these should only be temporary, and again, not in too great a dosage that they can be all mixed up and have teenagers try it to see how they feel about it.

Of course, some people say well, what's the difference, why don't you let them take the tranquilizers rather than to go into the whiskey supply and mix up all the different brandies, scotches, ryes, rum, and everything and have them fall flat on their face? But which is worse, liquor or the tranquilizers? At least we know better what to do about the liquor. You know, we can give them infusions, we can prevent them from having a hangover, and a few things like that. So maybe that's a little safer than getting them off mixing up the different kinds of tranquilizers that chemically don't work well together. But this is what we're running into a great deal in our private offices and in the emergency rooms.

Let's go on to neurological impairment.

We know that children with neurological impairment, no matter how minimal are going to have a combination of a learning disorder and a behavioral disorder. Now, it depends upon how this is resolved, whether or not they go on to have a personality disorder. In other words, the earlier you can diagnose the neurological impairment—the sooner you can make the educational prescription or the medical prescription—the quicker you are going to help this child develop a good self image. If this is not done, then this child that has an unresolved learning problem, an unresolved behavior problem, develops a permanent personality problem, as an adult, and goes on to acting out, etc.

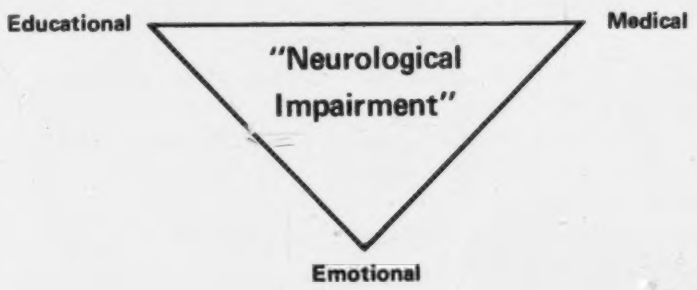


Figure 2

A person has to have a self image, which many times isn't always good but most of the time it should be good. You have to believe in yourself. My favorite expression to the teenagers is one of the Ten Commandments, "Love thy neighbor as thyself." If they don't like what they see in themselves, how can they like what they see in others? I always bring that point in, because I really believe it.

So we have educational, medical, and emotional factors. If there are strong signs of neurological impairment, then how are we going to differentiate this? The medical part would be the hyper-kinetic child that we just talked about. Now this hyper-kinetic child is going to need medical help before he's ready to learn. He'll need drug therapy, and he'll

need home structure. His parents have to be taught how to structure the home to make this child containable.

Now we have some children whose greatest minimal cerebral dysfunctioning is in the line of perceptual motor impairment. Yet, they're not hyper-active, they're not hyper-kinetic, they're not hyper-distractable, but they can't integrate their percepts. Now their greatest needs are educational ones. So they need an educational prescription, and they need school structure.

Now either one of these can have an emotional overlay. But you can also have a child with an emotional difficulty—whose difficulty is primarily family emotion. He can either be hyper-kinetic or perceptually impaired, because he is not being given the stimulation at home to develop perception. These children are hyper-kinetic because they are not getting the structure they need, or the acceptance, the feeling that they belong, and this particular cause then is one that needs psycho-therapy and needs parent/child counselling. So that you are able to have this child content to stay in school and learn, and not be worried about what's going on at home, or whether mother's going to be there, or whether daddy's going to come home, things like this. If a child is so worried about the family dynamics while he's in school, he can't learn. He's too worried. And don't underestimate the ability of a child to worry. They worry about death, they worry about health, they worry about what they are, who they are, where they're going—and our teenagers are very worried today about what is next for them. Especially our boys, you know, who have to worry about going into the service. They don't know whether to go to college and then in service and then professional school, or to go to service, then college, then professional school, you know, it's a lot. They don't know whether to get married, take on the responsibilities of a family and go in service, etc. You know the men are really thinking a great deal in this way and these are the things that make cause for worry.

The thing that I'd like to get across to you most is if we get all disciplines communicating with each other, knowing what they're saying, we still have to remember that it's a role of the classroom teacher to reach the individual child. And she's the one that makes this child feel ten feet tall. Because a child has to feel ten feet tall in something. If he can't do sports, then, for goodness sake, find something that he can do that he can feel ten feet tall, even if it's that he has to collect birds' nests and come in and give a lecture to the class on birds' nests. Let him feel ten feet tall, or let her feel ten feet tall, and I copied this from one of the Learning Disability phamphlets: "When instruction fails to arouse interest, when attentions lag, when thinking dulls, the search for explanation should replace reproach and criticism."

I had a little youngster that was telling me very proudly her poem and I'm going to use it in context: She said to me, "I know a poem."

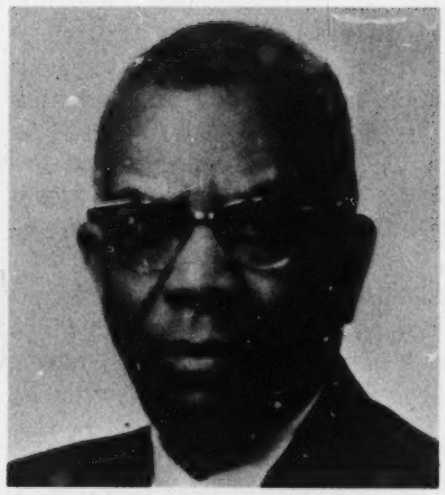
I said, "all right, you tell me."

"Twinkle, twinkle little star, how I wonder what I are."

And I think we can change it, and I made up my own poem, and I'll try it on you:

"Twinkle, twinkle little star,
how we wonder what you are,
in and out the school you file,
we trust you've learned in proper style.

Thank you.



Dr. Ira L. Gibbons

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SOCIAL SERVICES FOR CHILDREN–A COMPREHENSIVE APPROACH

I'm delighted to be here this morning and I'm also delighted that upon coming into the room I noticed that most of the front seats are taken. Now this indicates to me that you've been quite satisfied with what's been going on, and that you're interested, and want to get more.

Dr. Braun and I thought that we might make individual presentations and then entertain questions. We might even question each other's ideas, and yours, too. But first I'd like to present a kind of a framework within which I might say a few words.

To begin with, professionally, I was really connected with delinquents. I worked with delinquents some six years, both as a counsellor and later as a case worker. I always had some questions in the back of my mind as to why children behave the way they do.

Incidentally, they taught me a good many things. I learned from them about human behavior, and to this day–whether it's adults, children, or teenagers–I can always see, reflected in the lives of the children I work with and the young people I work with, some of the things that they have taught me. You know, you learn very easily and very readily when you work with children directly–every day, twenty-four hours a day. When you're

right with them.

Then I had some experience working with the Community Service Society in New York, where I was director for Camp Seabreeze, on Staten Island. We had mothers there, with their children from ten months to eight years of age, and they stayed for three weeks. So I had a wonderful opportunity to begin to see in the younger age groups—three, four, five, six, seven year olds—what I had been seeing in eight to fourteen year olds in the school for delinquents.

And then I thought that I might work with children in the community in terms of child development. So, we had an NIMH project, for about two years, for children from two years to five years of age. So I have had an opportunity to see, not only within the institutional setting or the camp setting, but in the neighborhood setting, what could happen with children. And, of course, I've worked with Head Start, and more recently as the director of Social Services for the National Head Start, and I've had a chance to travel all over the country.

The subject I've been asked to talk about has to do with social services for children, as a comprehensive approach and I think that Head Start has given me one of the great opportunities of my life, because I've had the opportunity to travel widely, and to see the conditions of men, and, particularly, conditions of children. So that I've had the opportunity to work with the Hopis and the Navajos and the Seminoles and the Mexican-Americans in California and Texas, and the blacks in Alabama, Mississippi, North Carolina, and also some parts of Appalachia and West Virginia and Kentucky. So I've been around a bit.

I've had this feeling about the need for services for children and, as a social worker, it occurred to me that what we ought to be talking about is social services for children, but on a comprehensive basis. I started to redefine what is meant by social service, what's really meant by social work, what's really meant by social welfare. I came up with the fact that when we talk about social work, we're talking about a methodology. It's a way of doing something, a systematic way of doing something about social conditions.

When we talk about social welfare we're talking about a broad aspect of concern. If we go back to our Constitution, the Preamble talks about a good many things, and among the things it talks about is concern of government for the *general welfare.* To my mind, that's what we're talking about when we're talking about social services. We're talking about the general welfare, or the social welfare, of all of the people—those who have and those who do not have.

When we're talking about social services, we're talking about the opportunity we have to provide all people with services. And this is what happens in order to formulate any kind of a neighborhood or community, or nation. Services must exist to facilitate life. And they're social in the sense that we have agreed among ourselves to supply each other, as the need would occur, with services we might have occasion to want.

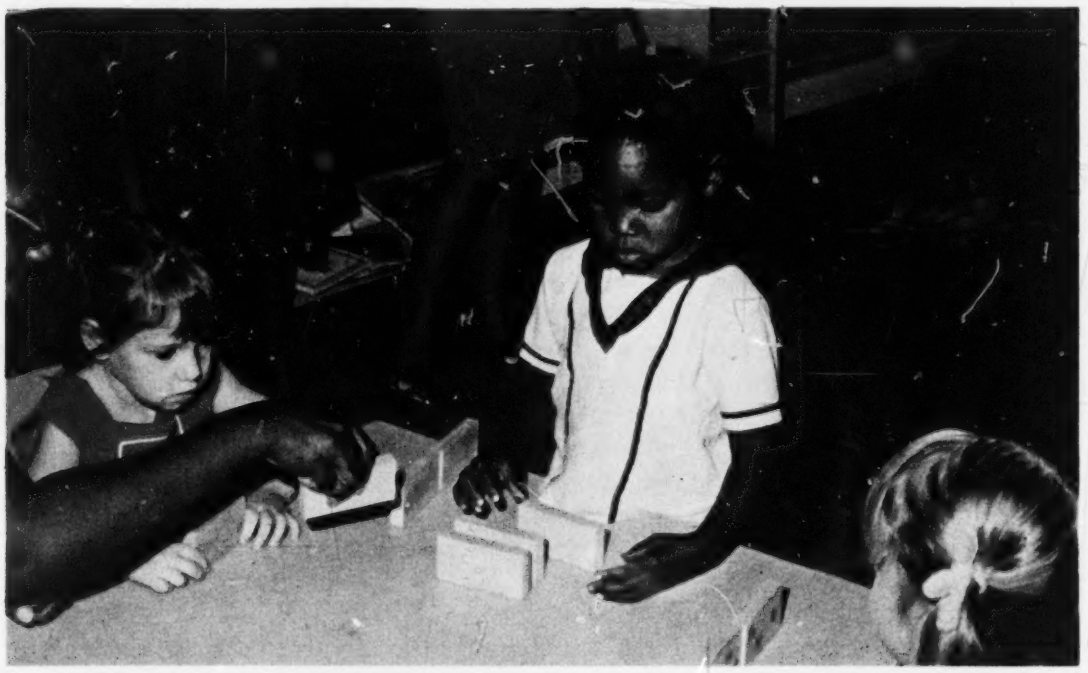
I often talk about the doorman at the hotel who stands there waiting for milady to come in her Rolls Royce, to open the door, and to help her with her bags. The fact is that the hotel management pays this man to be there whether milady comes or not. That service is provided whether milady comes or not.

When you begin to think about the needs of children, you realize that all children have needs, and we know about them.

We know that they need nutrition. We know that they need medical care. We know that they need to be educated. We know that they have psychological needs. We know that they need dental care. We know that they need parents to back them up as sufficient supports so that they can develop as mature persons.

We know this, you know. These are given for human life. And, somehow, in America, we've reached the point where we've got to decide, "are we going to follow the ideas of Athens, or are we going to follow the ideas of Sparta." You may recall that in Sparta the

tendency was to get rid of the weak. Physically or mentally weak children were destroyed, because Spartans wanted to be strong, and be able to fight and conquer the enemy. And so it is within that framework they developed their children. Athens, on the other hand, was concerned about the mind—the development of the mind of the person—not the mental health of the person, as we would call it today. And they were more for the conservation of human life, and the preservation of human dignity.



So, we have some choices to make. We look at our local and national budgets, and we still have some choices to make: whether or not we are going to take care of our children, or whether we put men on the moon, or whether we make super jets. We still have to make these decisions. It seems to me that you, as leaders, have the opportunity to help all of us make the decision. Will it be Sparta or will it be Athens?

And then, we have another thing about which we are concerned. You may recall Plato in the Republic, Book Five, described the society that he envisioned. And it's an amazing thing how, to this day, we still persist in the ideas that Plato presented: that society constitutes a pyramid. There's a king, and the ruler is on the top, and then the army to make sure that the people at the bottom don't rise up and overturn the rulers. Then you have the artisans that provide all kinds of things, the vegetables, and the fruits, and the meats, and so on, to support the army and the ruler. And, at the bottom, of course, are the serfs and the slaves.

We still have the idea that a lot of people have to be down below with just a few people on top, despite the fact that our industrial civilization has changed all that. In spite of the fact that, actually, according to Merton, at Columbia, we have a middle bulge. And he wasn't talking about that wonderful breakfast and the extension of your stomachs, this morning. He was talking about the fact that our society has changed. There is still a small top, but there is a much smaller bottom than there used to be. And there is a great middle bulge, because so many thousands of people, the poor, so-called, and so on, have moved up into the center, and a lot of people who used to be on top, since the depressions and the loss of money, have come down. So that we get this great middle bulge in our industrial and technological society. But despite this great middle bulge, we still think of this pyramidal structure.

Once we get hold of an idea, somehow we never give it up. We talk about how rich we are, how many things we have, and how great we are, and yet we persist, somehow, in thinking that we have to have poor people. Can you tell me why?

Well, the thing I'm concerned about, though, is this: If we have all these different kinds of resources, how do we use our resources? How do we use our services? How do we use our minds? How do we develop our children?

And it seems to me Head Start gave us a clue that we ought to follow up, because the Head Start program is a program that has three prongs to it. Despite the fact that these prongs have never really been developed, they are nevertheless there, and as leaders within the community you can help to make these three things come true.

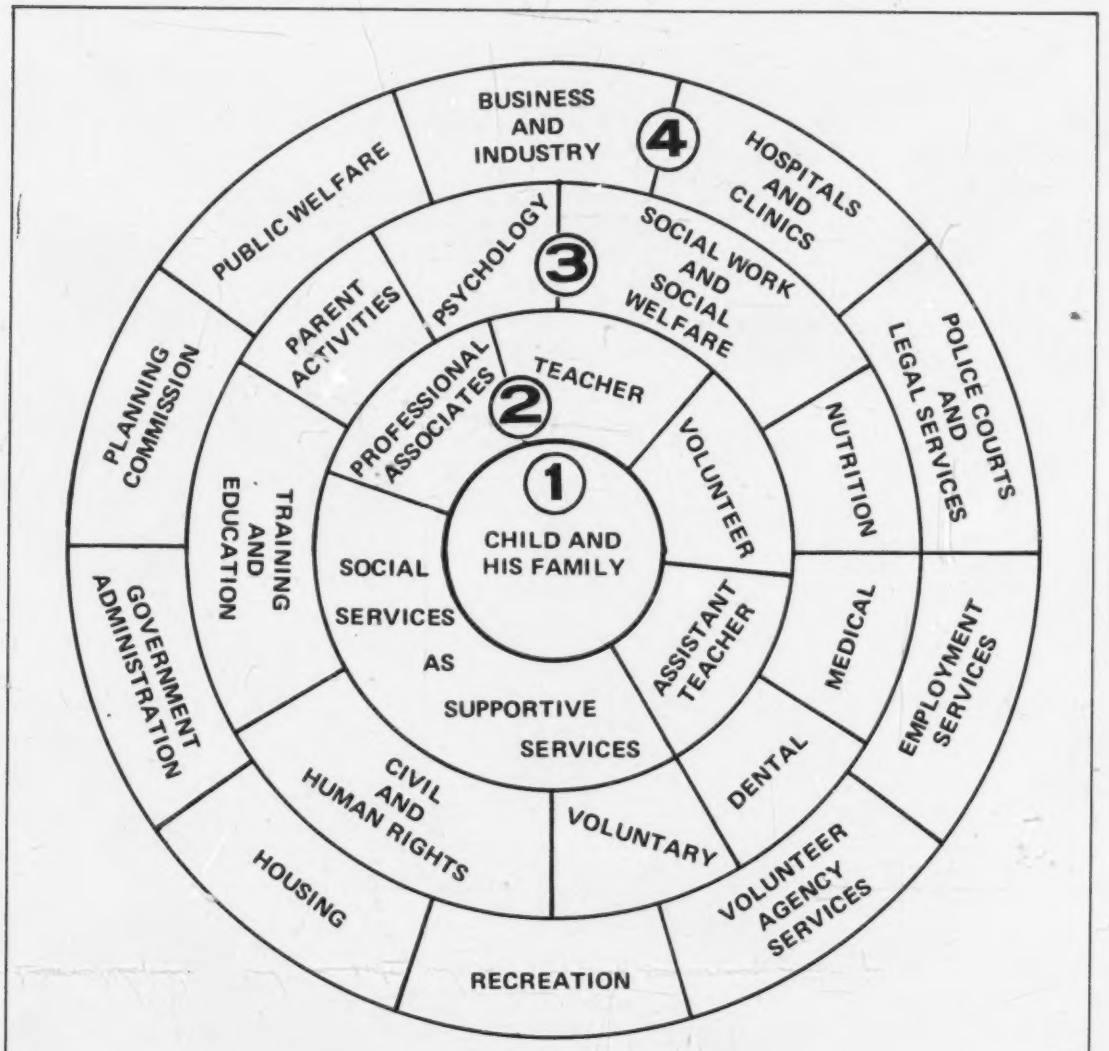
The first is that Head Start is a *comprehensive* program—comprehensive in the sense that it provides, or should provide, the education for children, the nutrition, medical care and examination, the dental care, the use of volunteers, the use of psychological services, and the use of what you might call community aides, but I prefer to call professional associates, and the use of assistant teachers. These are the supports, these are the resources, for Head Start. These are the resources that all children need to have, the rich and the poor alike, so that they might develop to the maximum of their individual potential. And we have in our communities other resources: business, housing, employment, recreation, government, and so on. But the real point is the linkage between the child and his family to these resources in the community. And that becomes the mission. That becomes the real challenge. How do you link the children and their families with the resources, on the one hand, and then see what resources the family and the children have that they can also contribute to the community and to the nation, so that it becomes a reciprocal kind of relationship. That's the way we build a strong nation. So that the children and their families can contribute to the nation, and the nation, or the community, or the neighborhood contributes to the family and the children.

Second, it's *interdisciplinary*—interdisciplinary in the sense that the nutritionist has an opportunity to work with the doctor and with the dentist and with the psychologist, and with the low-income people who would be here, with the professional teachers, and with the other people in the community, in consideration of the child and the family. This becomes a focus, and together we meet to talk about the needs and how can we relate ourselves to each other to provide the kind of sustenance, and, I like to call them, developmental provisions, if you please, for these families and these children.

Then, third, it is a *community action* program—community action in the sense that if nutritional services are not available, and there's a gap, then together we can work to see that this service be provided, or that psychological services be provided, that medical care or dental care be provided. Because we have identified the gap. We know the need. We've thought about it, and we've made a decision what kind of people we want to have developed in our nation. And having stated that, we go back and see what they need to achieve this. So it is not only a comprehensive program, and an inter-disciplinary program, but a community action program.

So what we have here is what I like to call a wheel, and I would like to remind you that the wheel, in all civilization, has been the most significant contribution which the mind of man has made. If we think about the significance of the wheel in our society, and all civilization, it has been wonderful. It has been the thing that has really helped man to develop his potentiality. So I've set this up as a wheel, just to remind ourselves that the wheel is still a very important tool for man to use. (see Figure 1 page 61)

One of the things, from the point of view of education, that I'm also concerned about, is our understanding of what we mean by education. And I like to think that since it has come from the Latin *educo,* meaning to lead out of, to set forth, that I'd like to use that as the way of looking at education. Education does not mean "pouring in," as one fills up a cup with water. It means being able to get out of the cup that which is within—out of



SPOKES OF WHEEL STRENGTHEN WHEEL AS THEY SEPARATE ACTIVITIES

1 The *child and his family,* as focus of the program.

2 The *classroom,* with teacher, assistants and supportive services (Social Services).

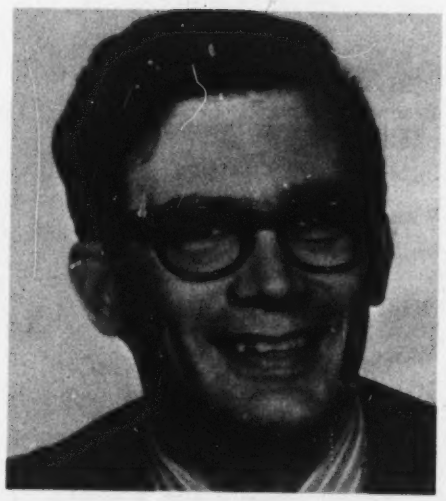
3 The *supportive services* as Social Services. Example: Psychology, Social Welfare, Nutrition, Medical, Dental, Parent Activities, Social Work, Education and Training.

4 The *community resources and services.* Example: Hospitals, Legal Services, Employment Services, Volunteer Services, Recreation, Housing, Planning Commission, Public Welfare, Business and Industry, etc.

Figure 1

the human being that which is within, all of his potentialities that are there. How do you elicit these? How do you help the person to get them out?

So my emphasis is on *learning* rather than on *teaching.* You can teach a thousand facts–the student selects one or two, and he's quite satisfied to learn these two, and that's all. That's as much as you can do. You might flunk him, but, you know, he still takes two out of a thousand. So, the point is, how do we help people to learn? Because it is through the process of learning that one begins to lead out of himself–and that's one of the great contributions of education–creativity and imagination and the skills and ability to use one's self on behalf of one's self and other people. So, *educo,* to lead out of, becomes very significant when we begin to talk about human beings, and their development, and particularly the development of children.



Dr. Samuel J. Braun

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MENTAL HEALTH COMPLEMENT

When I woke up this morning, I woke up abruptly at around 6:30, and I had the terrible feeling as though I'd met somebody in my dream, somebody who I know doesn't listen. And I was thinking, How can I get that person to listen? And I woke up, and realized what I was thinking about. I was thinking about you. Because there is absolutely nothing worse than to come in, in the middle of the week, after you all have been together, you've developed something about what you're up to and here we come, and we feel like two left feet, and we want to get in and share it with you.

What I wanted to start talking about, was to kind of sketch something that I guess we're all kind of having to grapple with, which is, somehow, how to make the experiences that you're thinking about in early childhood—or in schools, or wherever, that you want to call education, or child development—how do you make it so that it's human and it feels human, and it's humanizing?

I'm reminded of a story that somebody mentioned about visiting one of the up-country sites in Scotland, where they had no problem with older people feeling despondent, and useless, and out of touch with things. And one of the things that that person

noticed as he traveled around Scotland was this: You go into the drug store, and you can't get anything without asking for it, and it takes a long period of time to get it. But they had set a couple of chairs around in the drug store. So, while people were waiting, they talked with one another. And there's nothing that feels better, I guess, when you've got a pain in your elbow than to find out that somebody's got theirs in their ankle. You can talk together, and realize that you're not all alone, and that you can really actually care for one another.

And I guess that that kind of a problem is what we face in our own country. I happen to work in two cities that have a population of about 80,000 each, that's 160,000. And our Chamber of Commerce, at least the Chamber of Commerce that tries to go for grants from the Federal Government, explains these are cities that are almost the most densely populated in the country. We're all squinched together. We have very little recreation space, and things of that sort.

And what I became very much aware of was the kind of thing that happened when I was working in Head Start as a consultant. We would try to make referrals into the agency from which I was also subcontracted, and my agency was acting unwittingly in a way that wasn't making that experience of calling a very human one. The person might have to be in touch with six or seven different people. It's something like having to try and explain to American Express about the credit card that goes awry somehow, and you keep getting letters back from eight different places, and twenty different people. You don't know who you're relating to. I thought this was applicable to Head Start, but I soon began to realize that it really is applicable to everybody. It isn't just the low-income person, or the person who is really kind of on tenterhooks, and wondering what he's up to, and trying to get services for himself. It's true of everybody.

We really have to rethink this, and look at how we make the hoops for people, and how inviting, and how much it comes across that we care. Because it takes a lot of effort to care—more effort perhaps than ever. You only have to go into a supermarket, and you realize, you know, that the big object of the game is really getting a number of people into the store to buy as much as they possibly can and get them out again. In the process they may accumulate goods, but not many human contacts. So I thought that maybe I'd like to suggest some ways in which you may look for resources that you may not think about.

One of these resources came to me through having been involved in an industrial-based day care center and its creation. One of the things that we became aware of was that businesses were belching out styrofoam forms and little metal discs and all kinds of curious little pieces of equipment, and, lo and behold, nobody ever thought of these as anything but garbage. But it takes somebody to see with a new lens in their eyes, to look at something from a different point of view, from the viewpoint of human beings, human growth and development, from the viewpoint of kids. Kids do that—I guess it's one of the things that's nice about them—they remind us every once in a while that we're human and we're very, very vulnerable, and we're very charming, sometimes.

But what we did was begin to accumulate some of these materials, and the kids used them in very, very meaningful ways. I mention it as something that you might do. Go on a scavenger hunt, someday, or have a community group go out on a scavenger hunt to acquaint people with the fact that you do want materials like that for your program. And one of the things that's astounding to me is that the men that work on that end of the business, where they look at that material, kind of smile, and they feel better themselves. They may not have given money—maybe they will next time—but they get a feeling about kids, and what you are doing within the community that way, I think.

What's another example? Another one, it seems to me, has to do with high school kids. Having to deal with high school kids, today, is no easy chore. One of the problems lies in how relevant we make some of the experiences that they have. And one of the things that

seems to me very, very successful is having high school kids taking child development, and using little kids as a way of learning about child development. They start getting a feel for what it feels like to be with a kid, and whether or not they have anything to offer. I think that they find out that they do, but slowly.

So there are a lot of things that are within your own purview that are possible without having to go to the federal government.

But the other thing that I wanted to talk about was this. I work out of a mental health clinic, by and large. We cover an age range from two to seven, and we have little special classes and what not. But the major part of what we have to offer, I think, is teacher-home visiting. Rather than talk in great, laborious, enthusiastic terms about teacher-home visiting–which may or may not be of any interest to you–I thought I ought to mention some of the things that you can, with a parent, learn together. What kind of skills do you have, and what kind of skills do they have that help you kind of bumble along, somewhat, to find out what is going on with their kids.

I was struck, in going through your packets, last night, that some of the things that were in your packets seemed to me the kind of skills that you're trying to pick up this week, and will probably be wanting to brush up when you go back home. One of the skills that you picked up, on Monday, was observation, and you'd be very, very surprised how people do not know how to observe their kids. They just don't know what to look for. When they come in and tell you about their children, they tell you only about the top of the hills, not the meadows and valleys, and they leave you somewhere, I'm not sure where, but you don't know what they're talking about, because they don't tell you enough details.

Like a mother that comes in and says that she thinks her child is retarded. She has kind of selectively not seen what her little boy can do. She is continually saying he does the same things as her little daughter. Only with someone kind of observing, like you did, to get the data, is she able to come to some conclusion that that was not true. She came with an idea of not being aware of how to observe and what to look for. So you have to kind of say, "this is what to look for."

The second thing, was something about a framework–as I understand it, you're devel-

oping some of that in what you call objectives–but some framework within which to speak about kids. Because I think that very often you will meet people who will look at children and apply nothing but theological imagery to their children. They want them to be good and well behaved, period. That's the only thing that they want for kids. They seem to think about bad and good, period, and don't fill out anything more.

That's kind of sad. But equally as sad is for somebody to say, "I want my kids to be free and creative." That's the only thing that they work and operate out of, and that's not enough. It's not sufficient. These are all aspects of things which must be fit into a larger framework within which to look at kids. I think that's one of the things that you're trying to pick up here, and one of the things that you may be able to help a parent with. Because they're not sure how to talk with you.

A third thing that I think you have to offer, and I hope you'll pick this one up, is a way of translating a very abstract idea into very concrete operations. My experience with early childhood teachers has taught me one thing that I value deeply, and that is their ability to take an idea that seems complicated and make it so that it can be applicable in very simple form to a kid and to a parent.

One of the best examples that I can think of was a family that every time they got together they screamed at one another–at the dinner table each one would scream louder than the other. Sometimes, having such a family play a game, such as Lotto, and making clear to them that people take turns and what not–and then, at the end, suggesting that that's one way in which you carry on a conversation, is a way of helping people to appreciate how to look at one another and how to converse with one another.

Another thing that has been very much clearer to me is something about possessions, and where one keeps belongings, and whether one feels like you have a belonging. In some families there's no place to keep belongings. But when you're talking about where to put these belongings, you can suggest that a shoe box works out pretty nicely. And this can be a way in which a child can learn to play, once he feels like he knows what he's got to begin with, and his things aren't all over the place.

A fourth one that occurs to me is that the very idea of education suggests to me that there's a future, and that there is something that embodies growth. And the thing that I'm thinking most about is how difficult it is for a family to kind of leave off, and a school to begin. That is not an easy step for any kind of family, I don't care who they are or what they are, but especially for the parents who have lost their last child to school. It isn't uncommon to have difficulties that occur around going to school. And it isn't uncommon for the parents to be very angry with the teacher–to feel that she's not doing everything the way the mother was doing, and that kind of thing.

It's really a very, very big step for two people to make. For a kid it means the beginning of a school career, and really growing up and being away from home. For a parent, I suppose, it means something about the fact that you're getting a little older. You know, if you're a mother who has just finished raising five little ones that are always at your feet, you miss that. Because all of a sudden you're dead-face up against the question, now what with your life? How will you spend the rest of it? If you live in a suburb, I suppose you say, "Well, I'll talk to the other ladies," only to find that when you go out the door there's nobody there. Very few people stay home.

I mention that as something that you're probably sensitive to, and that you want very much to kind of include within your program, rather than to see you have to start a program with all the kids coming on the same day, for example. You're starting a program, but is it an early childhood program that takes into account the fact that there are families, and that there are kids. And that there are feelings involved, and one must think about that.

The fifth thing that I want to mention is this: You know what a complicated, confusing business raising a family is, and how important it is to feel like you have a crutch

to lean on. It's not easy to do that. In some families, in which mommy and daddy have clearly defined roles–daddy goes to work, and mommy stays home to take care of the kids–and there's no longer a grandmother or other relatives around, you find somebody having to shoulder the burdens of child rearing almost completely alone. And where do they get the nurturance, or even if they don't want advice, a chance to talk about some of the problems that come up?

I've just gone over the high points, and I'm sure we'll talk about some of these things, later. But I think these suggest some areas for you to consider in planning for early childhood education.

Dr. Marilyn M. Smith

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National Association for the
Education of Young Children

FOCUSING UPON A TASK

I want to start with a story that many of you may know. It's called the "Saber-Tooth Curriculum," and if you do know it, then it's perhaps even more enjoyable to think through it again, and if not, it'll be the first time.

But think with me back many, many years ago to a group of people trying to survive in a natural environment. To survive you have to have the basic things, like food. What's available? There are fish in the stream. You have to have some kind of shelter and clothing. And you can get the skins off of little woolly horses, because these exist where you live. And then you have to protect yourself from something dangerous called the Saber-Tooth Tiger that comes into your little village looking for food and does try to destroy you.

So, how do you survive? You estimate the surroundings you're living in, and you figure out how to cope with it, and how to utilize it for you, to have some kind of a decent life. So you figure out how to catch the fish in the stream so that you can have food to eat. The streams are very clear, and you figure out where the fish go in the little pools, and you learn to know where those pools are, and you develop fish-grabbing with the hand–that's your skill–and you get your food. You find clubs, and you learn to sneak up on the woolly horses when they come down for water to drink. You sneak up

from behind and you club them on the head, and you have the skin and you also have meat for food. And then you discover, quite by accident–or maybe by trial and error–that those Saber-Tooth Tigers that come in and destroy are afraid of fire. So you develop the technique for scaring away the Tigers by learning to build fires. You learn to build them around where you are, or at the entrances to where you are living to protect yourself.

Life is all right–it's pretty good. But if you are a thinking man, you decide that you might be more efficient at these skills, and you might make life a little better by helping your children to develop these techniques–fish-grabbing with the hand, clubbing the woolly horses, and building fires to scare away the Saber-Tooth Tigers. So you start taking your children with you to watch you do these things, and then to help you do these things. They become very efficient and very competent at doing these things.

But the other children in the village haven't done this, because no one has been teaching them to do these things, and helping them to learn. Then other people start to imitate you. They say, "I want my children to learn this, too, and I'll take them along and I'll teach them." And finally, many men get together and ask, "Why don't we put all of our children together and all of us work with them to develop these skills, and help them, and teach them these things?"

What you're proposing is an educational program and a curriculum. But you meet resistance. Some people in the village said, "Well, you know, if the Great Mystic really meant for children to practice these things, they would have had the instinct to do it without us telling them to do it." And other people said, "You can't change human nature. Don't bother with it. Just let them grow and develop and leave them alone."

But eventually more and more people did become interested. It seemed to make sense. And they did develop an educational system. So we had education, and we had schools, and we had a curriculum. And life went on for many generations.

Then some changes occurred in the environment. With the new Ice Age, and with all this increased melting, the streams were no longer clear. They were much fuller. They were filled with debris and rock. And they were muddy. The fish were still there. But when they went to grab the fish they couldn't see them. They tried and they tried, but even the most proficient of the fish grabbers could not grab the fish. So they no longer had food.

The ground got so marshy that the little woolly horses no longer came down to the streams. Pretty soon they left this part of the country and went elsewhere, so there were no little woolly horses to club anymore. And the Saber-Tooth Tiger–with the change in temperature and so on–got pneumonia, and died out.

No tigers to come bothering any more, but in comes a ferocious bear. The bear is not afraid of fire, and you cannot scare *him* away with fire. The bear is destroying. You can't get food. And you can't get skin, and so on.

So the thinking man–maybe primed by hunger and need–says, there's got to be a way to figure this out. He starts fooling around with ideas, and finally figures out some ways to cope with this situation. There are vines on that tree. I can take these vines and play around with them, and I can make a net. Then I can get someone to help me, and we can put the net in the pools of water and we can catch fish, more fish, perhaps, than ever before. And there are antelope now, in this area. We can always catch them for the skins.

Someone else was fooling around, and trying out ideas, and he figured out how to make a noose, and how to catch antelope this way. To deal with the bears that were destroying, someone figured out that you could build a pit and, camouflage it. If you knew the path they would take, and you built the pits in those places you could trap the bears. So you got rid of the bears. You not only got rid of them, so they wouldn't destroy you, but you had more skin and more meat.

So they began to survive, again, by the men of the village using and developing these

new skills. Then someone started thinking and asked a question, "But why are the children in the school learning fish-grabbing and clubbing the woolly horses kinds of skills, and building fires to scare Saber-Tooth Tigers? Why don't we change what they're learning in school in keeping with the skills we need to use to survive?"

You know what the answer was. "Oh, no. Because that's the curriculum, and that is the tradition, and that is education, and this would be adding frills. This is not educationally respectable. Because, you know, education is timeless. And if it is really of an educational nature, it doesn't change and we wouldn't dare add this."

But some of the men kept arguing, "Look, doesn't it make sense that our children need these skills to survive?" And they were told, "No, it might be a nice added addition, an extra-curricular kind of thing. But we don't have time, because we have to do these other things."

The thing I'd like us to think about—and sometimes it helps to go back in another setting that's not too close to our own, to get out of our old skin and take a look at what we're doing—first of all, think about three things. In an educational system, you see, three things exist.

You have objectives. You have some kinds of processes, or strategies, or maybe you want to call them techniques, some means to obtain those objectives. And you usually have a third thing, assessment, or evaluation.

Now it seems to me that the Saber-Tooth Curriculum is a beautiful example of people starting with some objectives—survival objectives: We need to develop the ability to get food in some kind of an efficient way that we can count on. And we need to protect ourselves. These were the objectives. And they developed some strategies for obtaining those objectives. The strategies were things like fish-grabbing with the bare hand, and scaring the Saber-Tooth Tigers with fire. But look what very quickly happened. The fish-grabbing with the hand, the building the fire kinds of skill, became, I think, an objective. So that people then were saying, "The objective is to learn to grab fish with the bare hand. The objective is to be able to build fires." They had forgotten about the original objectives.

I think the thing for us to try to ask ourselves, is if we, too, get these things confused. Do techniques and strategies and means become an end in themselves? Do we get hung up on perpetuating tradition and forget to look at where we are trying to go?

There may be many ways to get there. In that society, that culture I was just describing in the story, the objective didn't change, really. They continued to need to be able to survive, to provide safety for themselves, to provide food. But because of changes in their environment they had to change their strategies. And I think the same is true with us. We may find that our objectives remain fairly constant, but we have to continue to change our strategy to get there. Because the world keeps changing.

One thing about assessment and evaluation: objectives are talking about what we teach, the process is how we are teaching, and if you are assessing and evaluating, you're going to catch your errors. I would say that that thinking man in the Saber-Tooth story was asking the question "Is the strategy or the process getting us where we want to go?" And the thinking man was using assessment constantly. It's a questioning skill. This is why I want us to ask ourselves how frequently, how often are we checking out the strategies that we use, the techniques we use, to say, do they match where we want to go, are they getting us there, and if not, let's search around for some different ones.

It seems to me that our week here is giving us a grand opportunity to do something called getting perspective, which sometimes is very difficult to do. Most of our jobs entail implementing strategies. And we get tied up in keeping them going, and making them work, because that is our primary responsibility. It's very difficult, but maybe we need to get out of that situation, and come here for a week, and sort of shake ourselves away from it all, and look at it with new perspective and ask these questions, "What is it we're

really trying to achieve? What really are our objectives for children?"

And then take a fresh look at the strategies or techniques that we are using and ask, are these the best ones or could there be better ones to get us where we need to go? Here we can take time to become clear about where we need to go, and then find some ways to get there.

The thing I'd like us to do this morning, is to go through a number of little exercises to help ourselves think about these things. For one thing, to be sure and check ourselves: are we really separating objectives and techniques rather than having them all mixed up together? Do we know the difference? And what I propose is that we first talk about objectives.

To do this I'd like us to think about describing in our own minds this world we're living in. Just as in the Saber-Tooth Curriculum, the objectives were decided by looking at that world and deciding what people needed to live in it, let's think about this world right now and what people need to cope with and live in this world. Now that's a gigantic task. We each perceive this world a little differently. But the thing I'd like to do is just to share with you, very quickly, some of the things that concern me about this world right now. I know that there'll be different things that concern you. All I'm hoping is that by doing this, for a few moments, it will trigger in your thinking how you perceive this world, or what you think the problems are.

One thing that concerns me is the inequality in our ability to solve problems. We seem to have the ability to solve some problems to the level that I can hardly comprehend, such as putting a man on the moon. It's almost beyond me to comprehend the energies and the skills that allow them to do that kind of thing. But it seems so incongruous to me that, while we have done that, we have almost totally failed to figure out a way to provide opportunities for all men to have jobs, to use their skills, to support themselves in order to have dignity. We keep talking about autonomy for children–about initiative, about self respect. Well, do we have it in this world–when there are so many people in this United States who cannot have the dignity that can come from having a basic skill, or an opportunity to use that skill, to support themselves and to contribute. We can't seem to begin to figure that one out, and yet we can put a man on the moon.

Something else that's difficult for me to comprehend is how we can, on the one hand, transplant hearts, kidneys, and all these medical miracles, and yet we can't seem to figure out how to provide the very basic of health care for children or adults. And we know what that health care is and what it needs to be. But we can't seem to figure out how to make it available to all human beings.

We keep coming up with all kinds of tremendous new ways to do things–new ways to build things, and new kinds of weapons, for instance, that we can produce. Think of the minds, the brain power, as well as the money, it takes to produce these weapons that can destroy beyond my comprehension, and yet we can't figure out ways to produce houses for people that are decent to live in, or school facilities that enable us to do the job we need to do.

We seem to be able to very easily spend billions of dollars to *destroy,* in terms of spending it on defense and on war, and yet, when we start talking about what it would cost to *preserve,* just to preserve, the environment–the air, the forest, the water–we seem incapable of doing this. This is one kind of thing that I see as I view the world. These tremendous inequalities in what we can do when we put our attention to it, and the other things that we seem to ignore.

Another thing that I find I have to mention, as I'm talking about how I view the world right now, is a tremendous concern for grabbing at simplistic answers. One example would be to try to describe the upset I felt when Kent State occurred and Jackson State occurred this last Spring. At first I felt a tremendous upset that this kind of thing could happen. Then my upset changed, as I heard people around me making their comments

and their judgments about it, because I kept hearing so many people very quickly saying, "See, college kids are all bad." In this day and age, you see they've had it. Young people are lost, they're no good–this total generalization to all young people. And then, quickly, following it is the solution: clamp down. Put on the clamps tighter than ever.

Very soon after this I went to a week's conference where half of the people there were high school students. It was a tremendous experience to live with them a week, and talk at long lengths about the things that they are thinking, the things that are concerning them.

They are thinking, and asking questions that I didn't pretend to know to ask when I was in high school–about pollution, about the environment, about priorities, about what we do to each other as people, about the need for communication. And they're informed about these things. This, to me, was very hopeful–to find young people thinking through and asking these questions.

But then it became very depressing as I got to know some of these young people better, and found out that they were feeling in their community, and at the high school level, tremendous rejection for asking these kinds of questions. Some of them were experiencing it in school. They would write a theme, and would pursue one of these

topics, and ask some of these questions. And then, they're reprimanded. They're ostracized. They're rejected for doing this. They're called on the carpet. In many ways people say, "Don't ask those questions." Some of them were feeling the rejection from peers, some of them feeling it from home, but it was there. And at the high school age many of them were saying, "Forget it. It's no use. Why fight for these things?"

It was interesting to see the adults at this conference trying to rally round and support them, and say, "Please, have patience, join us, some people do care." But at the high school level how much can we expect them to take a stand all alone as some of them are having to do?

One other thing is my concern for our inability to communicate. We've heard a lot about language and communication. When we start talking about educational objectives how often we say "to communicate." I have to question what we mean by communicate, because it seems that so often we're saying communication means for *me* to say words to *you.* And it stops there. I've communicated.

But, of course, I haven't–not until I've sat down with you and listened to how you respond, and how you feel, and how you think. And I mean really *listen.* This is a two-way process. We can see examples of it *not* happening all over. Many of us have been talking about it as we observed teachers. Somehow we've failed to help these teachers in these classrooms have an opportunity to listen to children. Instead, I think, we have geared the teachers to think of communication as sort of one way, rather than helping them structure the situation so that they can listen to children and have communication going two ways. So that they can observe, and see what they're doing, and what they're thinking, and not be under the assumption that teacher says it, and the kids got it, and that the kids therefore are thinking what I'm thinking.

It has been interesting recently talking with a black friend of mine, who is experiencing a difficulty with communication. I think many of us have the same experience. She is finding herself as a black person walking into a group, having other people that are black in the group say, "Oh, I'm glad you're here, you know what I mean, you know what I've been saying." And she was describing the frustration of having someone she doesn't really know say, "Oh, I'm glad you're here because you know what I mean, you know what I think." I've used the black friend as an example, but I can say that we all experience this all the time.

You're trying to communicate with someone, and before you hardly get started, they say, "Oh, well yeah, I know what you mean." Or someone will point and say, "Well, *you* know what I mean." This is a slam to one's individuality, to one's autonomy. You say, "Well how do you know? We haven't sat down and shared ideas with each other. Let's explore this together, let's give it a chance before we decide this.".

I hope that what we're doing right now is just triggering people's thoughts about how you see the environment, how you see this world. Now, I'd like you to do something individually. First of all picture in your mind some children that you have responsibility for, or you could have responsibility for. I'd like to suggest that the children you picture are very young children–three-year-olds, two-year-olds, four-year-olds. I'm asking you to really get in your minds a few specific children, because I think it helps if you don't just think of it in very general terms. Now, picture those kids growing in this world that I'm trying to describe, and you've been sitting there describing to yourselves in your own minds. They are growing day-by-day into this world, and this world isn't changing very quickly.

Now, try to think what personal attribute, what ability, would you want to help those specific children develop that might help them (1) cope with this world that they're growing into, that's not changing, and (2) might even, if they had these abilities, enable them to better this world a little bit. You're really trying to list some objectives. In this world, what are kids going to need to survive, and maybe even make it better? You may

want to call them personal characteristics, or attributes, strengths, or abilities. Not what's to happen to them, but what would you like them to be able to develop within themselves–to be capable of–that could help in this world. Think about it and then list three things, very briefly, not even in sentence form, just phrases. Limit it to three because we know we can't do too many things all at once. Really force yourself to decide what would take top priority if I had to list only three things in terms of characteristics or attributes that I'd want to help these kids develop as they're growing. It's a different way to come at objectives. List them, and keep in mind that this is a very personal thing, and later if you want to share it with someone, okay. If you don't, okay. But for now just sort of communicate with yourself.

Obviously, what we're doing now is just trying to brainstorm off the top of your head three key objectives for children. We're going to be working on this and thinking about it more. What I think I'd like us to do now is to do just a little bit of comparison–just for interest sake–of what people said, because I think it's interesting to see, out of this group, how people answered that question. The quickest way I know to do this is to ask people to get in clusters of about four or five people. To the degree that you're willing to share what you wrote down, quickly tell each other what you put down. And see if you can get a summary of what within this group were the things that seemed to be reoccurring–the essence of what you are saying in this little group. Try and do it real quickly. Put it on paper, get it up here, and we're going to quickly summarize this and get it up on the board for us to see.

So Keith is going to be trying to get a summary on the board while I talk about the task. You keep seeing on your program, "Task, Task, Task." Well what in the world is this Task? This is something that we want to propose that you do, in writing, by Friday morning. Let me try to state what it is.

Will you, by Friday, put into writing (1) a few key objectives that you could really say, "I can fill a commitment to these objectives for the kids that somehow I can touch here in New Jersey." Keep in mind that these objectives are of the broad nature we defined a while ago. They come from looking at the world these kids are growing in and saying "Here's a few key things, attributes, characteristics, abilities, that I'd like to help these kids develop." That's what we mean by objectives.

You've talked about them, and you've heard someone else list them. Now we're going to see what many people listed. The task is to go back and sit off by yourself some place and really think out "What can I feel a real commitment to?" Because if the commitment's not there, I'm not sure all the nitty-gritty action is going to follow.

The other thing I'd suggest, as you list these objectives, is to keep it to a manageable number. Be realistic about it. Ask, "How many things can I work on at once? Therefore, I'd better establish some priorities, I'd better say, there are a whole bunch of things I can list that I'd like to help kids develop, but I can only turn my energies in so many directions, so I'm going to have to pick and choose to establish some priorities." And, of course, part of it, then, is matching your own abilities. Say, "I've got some strengths here, and I think I can really set myself to work in this direction and someone else in another direction."

Another part of the task is to be sure, then, to question yourself after you've listed these objectives. "Are these really objectives rather than teaching techniques, teaching strategies?"

Ask that question after you get them down. Then after you've listed a few key objectives–and you may want to write down some of your reasons for listing them, because people are going to be asking you, challenging, and questioning you–ask yourself, "What are some effective strategies, or techniques, or approaches that I might use to obtain those objectives?"

Let yourself brainstorm, and think of all kinds of possible techniques and strategies that might help. Then go back and ask, "Now which ones really match up best with those objectives?" And keep in mind that this list of strategies or techniques should remain flexible. Everytime you learn about a new idea, you go back and ask, "Is this a better strategy than the one I knew about last week?"

That's the point about the Saber-Tooth Curriculum—the strategy to get to the objective can keep changing. Keep looking and searching for a better and better way to get there.

A third part would be some mention of how you personally would assess the situation in order to keep asking the question, "When I start using this strategy, is it getting me where I intended to go, rather than getting me locked in to the strategy? Some way, I want to figure out a reminder to myself, and some technique to keep checking, and getting, feedback to me. Are these strategies and techniques getting there?"

One immediate caution I would add is to be careful not to jump a step. Some of us were having a lot of fun last night talking about how can we help teachers change. But we've got to be very clear about what change we want, first, and that's what we're working at here. Where are we trying to go? Can we really articulate that before we start talking about the change process? That's another story. We've got to deal with that. But part of the change process is knowing, ourselves, very clearly, what our objectives are and what techniques we think will get us to those objectives.

All right, you've put down some thoughts about objectives. Now what are other people thinking?

DR. OSBORN: I've arrived at a master list of five, and I hope I haven't loused up people by this too much. It seems to me that this first objective was expressed a great deal by almost every one: "To be happy with one's self," or it was stated another way, "To have a feeling of self-worth, to have a feeling of self-awareness."

A second objective was some attitude toward mankind—and it was stated different ways—of tolerance, of acceptance, or respect for others, or of love of other people.

A third one is really the acquisition of some skill techniques: to be competent—I assume in whatever one does—the necessity for study skills. And I think, here, people saw that skills are necessary in order to do things in this world, and this includes to be able to think analytically and logically. I'm assuming, here, that nothing is as simple as we thought it was when we were eight or nine years of age. We realize, for example, that the Vietnam War is not all wrong or all right—somehow you've got to take the pluses and minuses and arrive at something, and then to evaluate this problem after you are able to think through in this fashion.

Number four—I think is to develop an openness to ideas, an openness to others, and some ability to adapt.

Number five is a catch-all. Here are some characteristics that are mentioned by different groups: to help people to learn to be honest, sincere, have some moral sense of rightness and wrongness.

DR. SMITH: One thing I'd like to do is to ask Milt and Keith if they want to add something to this in terms of what they think.

DR. AKERS: Right off the top of my head I wish that our concern of other people included the words "responsibility for other people." It's nice to be accepting and tolerant, but have you thought about compassion? You know, we've got kids now, young people, opting out, living a life of isolation. And we're not going to make it that way. I wish that our concern of others really carried us to the point that I have some responsibility for you and everybody around me. I thought that was a void of that question.

DR. OSBORN: I thought that the people who had said love for others, frankly, were getting close to that, Milt, but I think your term compassion is perhaps more explicit.

DR. AKERS: I even want more than compassion. You know, I think we're apparently

sorry for the blacks and the poor and the Indians, but I want to go beyond that. I want to feel that I must *do* something to help them. I can add the word responsibility to other people, which stems from love and compassion, respect and so on. It's basic, but we have to go beyond that.

DR. OSBORN: I see your point—it's one thing to love and sympathize, and another thing to do.

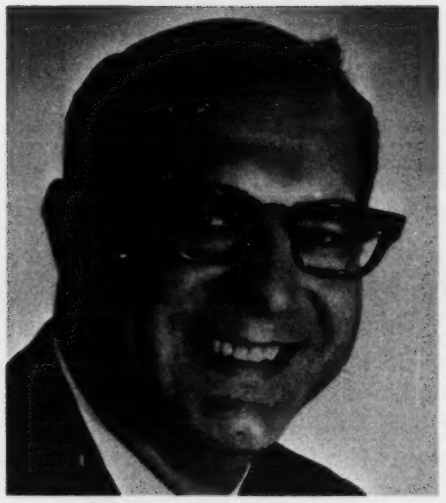
DR. AKERS: Right. Because we've got a lot of loving people today who are doing nothing and that's bad.

I'm interested in objective number one. I had occasion to examine a number of curricula which ran all the way through school systems, K through high school, about a year ago. And I came up with the conclusion that the preamble to every one of them included something in this area—adequacy, confidence, competence, etc. And having dispensed with it in the preamble, we forgot it in the rest of the curriculum—and certainly in the implementation of the curriculum. I wish we could get to the point where we really don't content ourselves with the "opening prayer," like that, and then go on and do whatever we want to do. That could be the base of the whole curriculum right there. We could begin to see that what we really do contributes to kids feeling their worth and so on.

I'm playing also with the word "courage." In all of those things I looked at, I never found the word "courage." Now maybe confidence, etc., etc., implies courage. But my hunch is that if we're going to make it, kids are going to have to make it in the world of the year 2000, that you and I can't even fathom. We can't even fantasy about that world. It's going to take guts. It's going to take something called courage to cope with and get on top of it. So, you know, that's my own personal hang-up. "Courage." I'd like to have it thrown in there too because we need it—you and I need it.

SMITH: The big challenge, there, is that when you list objectives, such as responsibility to others, or courage, etc., then to really do the search to find the strategies and techniques to get you there. Rather than to put it down in words, and say that's my goal, but that's as far as you go.

AKERS: Yes. See, we can intellectualize tremendously that this ought to be done. But then you do it, and shake the boat, and then you run into problems over here, and so on. But we've got to have the guts to move, and make a few mistakes and be batted around a bit, and be knocked down. And I think that you help kids to develop courage. I'm sure you can, really, help the kids to get the confidence and the courage to really move in and try something that they can't quite be sure about. And I want it for four-year-olds and I want it for forty-year-olds.



Dr. Robert Chasnoff

Newark State College
Union, New Jersey

CONCEPT FOR SOCIAL CHANGE

When you looked at the three meetings this morning, you were making a force-field analysis with respect to the possible success of that meeting. Let me give you an example of a force-field analysis.

If I have a football team, and I have three, four, or five flankerbacks, who are very quick and very strong, that would be a facilitating force and might cause me to have a successful season. But if I am like the Cleveland Browns and have one experienced quarterback with weak knees, and two rookies as backup quarterbacks, I would say that might possibly be an inhibiting force influencing the possible success of my season.

So a force-field analysis is a kind of a snapshot of what the situation is right now. It is a look at the various forces that are impinging.

Now let's kind of lump all our three things together this morning and think about what kinds of forces could be possibly facilitating or inhibiting them.

Let's pretend they are all in one community, so as not to pick one out, necessarily. But we saw, for example, the humaneness and concern of the leaders, I would say, as a facilitating force. Let's say that our goal is first, acceptance of his ideas, and, finally, success of his project. So one of the facilitating forces, then, you write down is, well, humaneness and caring-ness of the leaders.

On the other hand, we saw as a possible inhibiting force, lack of trust. What are some more of the things? Suppose this was community X. What are some more of the things that you could see happening there this morning or that you could dream up about a community. Can you think of some?

Participant: I can think of one. In my community the budget got defeated a few times.

Chasnoff: Okay. You get the idea. Something else?

Participant: Involvement of total community versus isolation.

Chasnoff: What are you saying? Where do we put it?

Participant: I think it's on both sides. At some levels there was great involvement, yet at another level it was isolated.

Chasnoff: All right. So you would put it on both sides. Suppose you had to choose. You know, one vector is this long, and one is that long. Where would you end up?

Participant: I'd want it over on the facilitating side.

Chasnoff: Never mind what you want! I go to my physician and he wants me to be healthy, but he hasn't given me an honest diagnosis.

Participant: I think then it should be on the other side–lack of involvement.

Chasnoff: Lack of involvement, all right, then. As we do this, I don't think that we necessarily have to clinic those three sessions. You can just think of some other situations you know.

Participant: We say we involve, but we don't.

Chasnoff: All right.

Okay. I think that gives you the impression of what I am driving at. What I'm driving at is that this has been used by some people as a tool to diagnose, in advance, what are the possibilities of acceptance of our plan, and in a group of people in doing this kind of force-field analysis, using the resources of a lot of people–people come up with: "Hey, there's a segment of block population." That's a resistant force that you don't know about. Or similarly, there's a facilitating force that you do know about.

I'm contending that frequently we attempt to introduce innovations without making this kind of diagnosis. And without making this kind of diagnosis, we are wasting our energies. We're wasting time and money. We are ineffective managers. So that "gung ho-ing" it on a new project back home may be the right thing to do, but it is like getting ready for a football game, when you have had an opportunity to scout the other team, and saying, "Well, we won't bother." And lo and behold in the second half you find out it is impossible to run the left end. How nice it would have been if you had known it at the beginning.

You know as well as I do about the literature of innovations. There are more innovations strewn on the road of good intentions–good ideas. Perhaps you have heard some ideas this week and said, "My, we were talking about that back in the thirties." There were good ideas then, there are good ideas now. Why didn't they get integrated into the system? They didn't get integrated into the system because of poor management, because of failure to diagnose the forces that are there.

We managers–we leaders in education–have a habit of working on one little piece at a time. For example, say you have a good early childhood program over here. Suppose you put that in as a facilitating force. Now, that will immediately spawn half a dozen resistant forces. Somebody will say, "But how about the cost or how about the extra time. Our contract says we can't have extra meetings, bang, bang, bang, bang, bang. It is naivete to expect that you can go back and introduce a new plan without some diagnosis–and the diagnosis should be made by the people who are most involved–the community groups, the parent groups, the teacher groups, etc.

I see the job of the manager, then, as being the one who says, "I have it as my goal to improve our services for little kids. Let us together make a diagnosis of the forces that will impede us and the forces that will facilitate us. And this is the simple technology that

has been used, sometimes with success, and, sometimes, it confuses people.

Before we go on, I want to check and see to what extent you are confused about what I just said. Are there any questions or comments about what I said?

Participant: I was thinking of another example of people who manage and I think they made a mistake from what I read, and that's the people who predicted that women would be wearing midi skirts. They are not selling. That's an example of not being aware of the times–of the times in which people don't want to be dictated to and the times of woman's liberation and they missed diagnosing this situation. I thought I would throw that in.

Chasnoff: That's a perfect example of just the thing we are talking about. It is what I call reacting to a piece of the problem–or reacting to a piece of the situation without looking at the total social field that they are dealing with. It is a brilliant example, I think. Okay.

Participant: I have a question. Could you distinguish again the roles of the managers in this process and the role of community people–people who are actually going to be involved in the change that you are trying to get across. I am not sure–

Chasnoff: I see them as collaborators. But I see the manager as being the person who has some skill and will walk in and say, "Let's look at the problems we are going to have."

Let me use your group as an example: Last week I was working with Curt's group and they have people working in different kinds of jobs and the first thing they did was make a list of the problems they are going to have. I remember doing that with a migrant group, once, and asking them to do a different kind of diagnosis from this–making a list of the problems you are going to have–and one of the teacher aides got up and said, "Well, one of the things that our group sees as a problem is we don't like to be treated like furniture." And that became something that the teachers and the director of the project really had to look at. Because if those people were treated as furniture they were going to respond like furniture–and they didn't need more furniture, they needed people. And that little turn, that little diagnosis, before the project ever started, in the opinion of everybody there, became the most significant thing–diagnosis made by people with maybe third, fourth, or fifth grade educations.

So the thing that I am saying is: this morning we were doing a kind of a diagnosis–the force-field analysis. We, in effect, were doing a force-field analysis of each situation, when I was asking you to look for the facilitating and the inhibiting forces. I was asking you to do a force-field analysis on that meeting *per se.* And now I'm talking about doing a force-field analysis within the total scope of your community. My approach was to have us do it, first, and then name it. All day long we have been dealing with a force-field analysis as a method of diagnosis.

Okay. I'm going to close by handing out something that you might like to take home with you and work with. While it is being distributed, let me simply say that the force-field analysis is more an attitude than a gimmick. Some of you may say, "Well, all you're talking about is a scientific method, whereby you gather some data before you create hypotheses," and I would say that's absolutely right.

And the criticism I have of myself, and other people I work with, is we frequently go into meetings, don't we, and say, "Well, all we have got to do is this. Okay?"

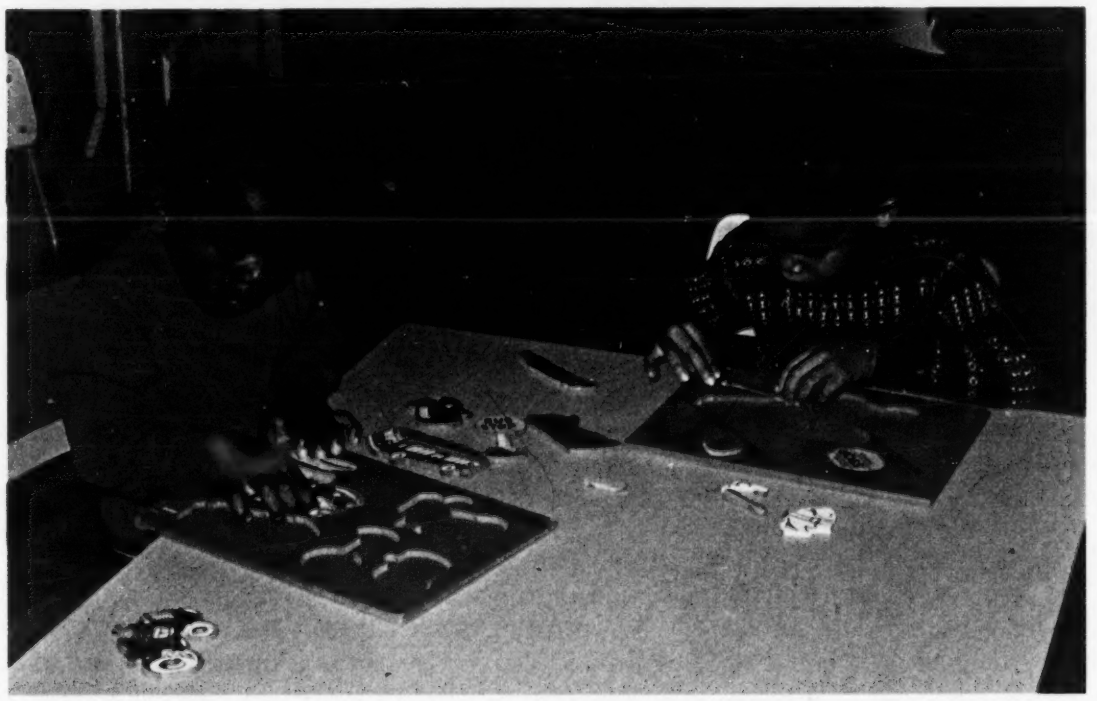
Let me say one more thing on that and then I will turn to the paper. There has been some research done on what do you do about these forces. The research indicates that you will do better to work at diminishing the strength of an inhibiting force, rather than increasing the strength of a facilitating force. So if lack of community support seems to be the real issue, if that seems to be the one that's bothering you, you may as well give up your project until you have done something about changing that force and causing that force to become a less pervasive, persuasive and powerful force.

The short cut we often take is to add something new. Let us have a new office of something, or let us get a new telephone that will increase communication. You know

better than I do that it doesn't work. The shortcut, band-aid approaches do not work and you know it.

Think of all the innovations you have tried in your system or in the State. Where are they now? Many of them were good ideas. Team teaching, I am told, was first introduced in 1929. How come it is still not the thing? Because people have not dealt with the inhibiting forces. Okay?

Now this sheet is something that you might want to use for yourself. Suppose you write on there a goal that you want. The goal is some kind of a change. You want to change from non-acceptance of a program to acceptance of a program, or greater participation, or whatever–however, you define it. This sheet asks us to look at four compo-



nents among the forces. Some forces are supporting change and some forces are forces against change.

When we make our force-field analysis, we frequently forget one very important component in this force-field analysis and that is the conflicting forces operating within ourselves. So when nobody's looking sometime you might want to make some arrows and jot down a diagnosis of yourself–the kinds of things you do that might help you to achieve that goal and some things you do that might work against that. Inter-role features deal with different roles. For example: if you're an administrator, and you have to deal with community groups, or administrators, or boards over you, or teachers below you on the hierarchy, what are the factors there.

And, then, what are the aspects of the organization I am in? Suppose you were working in a high school and you know that every innovation that has been tried, the education association belts in the solar plexis, perhaps not so much because they are against innovation, but because they have to keep up the pressure against the administrators or whatever.

Okay. Ours is an organization that seems to spit out change. What are the things that you know about your organization? And then the features in the surrounding community.

Now, I am not giving you this as a task for you to do right now, but I am giving you this as a kind of a windup to dealing with these objectives. I have focused attention,

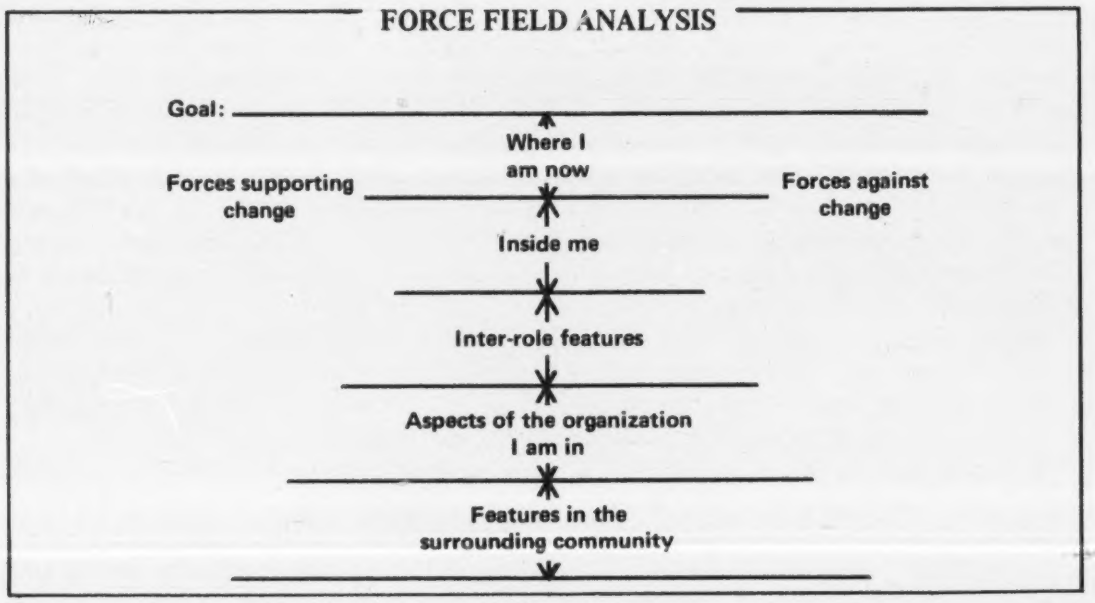


Figure 1

today, merely on diagnosis with respect to change. Diagnosis is only one part of the problem solving sequence, but, given a choice, I thought it would be more useful to focus on one piece of problem solving, which is diagnosis. I chose to focus on that because that's the part we do the least well. We have a lot of ideas, and we have a lot of enthusiasm, and, if I can borrow a phrase I heard yesterday, we have a lot of inspiration. Now, I value those. But I am saying that there is also some hardheaded kind of diagnosis by oneself, as the manager of change, and by the people one wants to manage change with, that will give your change a fighting chance to succeed. And so I suggest you might, when you are alone sometime, want to try to work out this force-field analysis. Then, if there is somebody you trust, you could show it to that person, and say, "Have I left anything out?" So that's all I have to say about the two objectives that I stated this morning. Any questions or comments?

Participant: I heard you say–this is not an objective, but I guess I'm just asking you to add a little two-minute lecture–you talked about the importance of support systems and it said something to me.

Chasnoff: What happens very often is that people go to conferences alone and then they go back and they talk utter gibberish to the other people back home. And the people say, "Yeah, yeah, you're a real nice guy, but I don't know what you're talking about." Somebody picked that up this morning about terminology. Or somebody will say, "Come on, don't give me this 'trust' business. We went all through that in the early 1950's." Or they have a different definition of trust from the one you have, and so on.

The evidence seems to say that an individual working alone is unlikely to get very much done in terms of changing the organization. Therefore, it is important to build up some kind of a support system within the community, or a support system across communities. One of the things that I would hope for you, from the little I know about what you have done this week, is that you could maintain some kind of a liaison with each other, or a liaison with EIC, because I am saying that, working alone in your system, it is impossible–that's kind of a strong statement–it is impossible to bring about real change. You may be able to bring about some kind of little dinky change on the side, but the system will chew it up and spit it out. But to bring about massive change, such as the kind you have been talking about here, you need a support system.

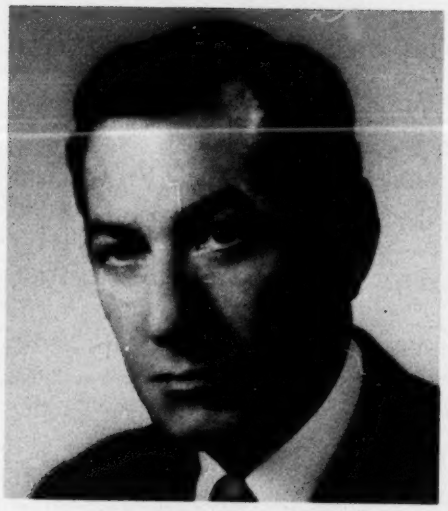
Look at the changes that you are asking for. You are not asking a farmer to plant one

kind of corn instead of another kind of corn seed. You are not asking a physician to use a pink pill instead of a yellow pill. You are asking teachers to change a life style. Now that's very hard. It is very hard for me to change my life style and it's very hard for each of you to change yours. And I am saying that, in order to bring about some of the changes that you people are talking about bringing about, you have got to have some support from the outside. You cannot do it alone. And my recommendation would be some kind of a connection with each other, some kind of a connection with an agency like EIC, and then, hopefully, some kind of connections that you can create within your own organization. Every politician knows this. He can have all the greatest ideas in the world, but if he doesn't have a handful of votes he is not going to get anywhere.

So this whole conference could very likely be pie in the sky. When you go back to the stack of letters and complaints and meetings and what not that you have, if you don't set yourself up with a job of self renewal, where you say: "Now this is where I'd like to be a year from now, what kind of support system do I need to have?"

It means also an abandonment of crisis management. Now crisis management is the management style used by 95% of the administrators that I know. Now that's a harsh statement. I would include myself in that 95%, incidentally. What it means is, if you are going to create this kind of machinery, you'd have to have the kinds of meetings that you people were talking about: "Folks, I've got some ideas, I want to look at these ideas with you."

We saw this morning some beginnings of possibilities for support systems. In the first case, if those people all walked out with the belief that it was their project, you would have a support system. And if that principal had some links with other people, he would have a stronger support system. Now we could go on for days on that, but I think it's good not to talk too long. My objective was to really focus your attention on the importance of diagnosis.



Dr. Milton E. Akers

Executive Director
National Association for the
Education of Young Children

THE YOUNG CHILD AS A LEARNER

A friend of mine who was a beginning teacher, who had quite a few things to learn, made the mistake one time of putting one very attractive truck in a sandbox with two four-year-old kids. And you know what happened. They tried to find out who was going to get it—they didn't quite come to blows, they didn't quite come to tears. But one of them said, finally, almost on the verge of tears, "If you don't give me that truck, I'm going to tell God on you." And the other one snapped back, quick as a flash, "I just talked to God and he said it was my turn."

Out in California they tell a story about a little four-year-old girl who had been to the toilet and was washing her hands—and if you've ever watched a four-year-old wash her hands it's like a doctor getting ready for surgery—and she was singing at the top of her voice, "Girls has 'ginas, boys has penises, girls has 'ginas, Miss Mellon, what do people have?"

I'll tell you one more story. This one is not as funny and cute as those, but it illustrates the point I want to make. Many of you know Marilyn Smith. Marilyn is one of those people who is very transcient. Her family lives out in Oklahoma, and she had a young niece, just over a year old, who saw her only at the airport. And every time this child saw a plane in the air she would point up in the air and say, "Moo Moo." And then,

when she began to be able to verbalize a little bit more, she said, "Marilyn." At about the age of between one-and-a-half and two years she said, "Marilyn lives in the sky."

Get it? The experience that child had had was that this tiny speck comes in and lands and Marilyn appears. And the connection is then that Marilyn lives in the sky. She comes down from it, she goes back into it.

Now, why do we laugh at stories like that? We laugh at them because they're kind of cute. We're kind of impressed by the inaccuracies, the logic, the kids are trying to express. They try to piece together their experiences. They are trying to straighten out, trying to make sense out of their understanding about the world and the people in it. But even though they are inaccurate, I would submit to you that they represent a level of thinking and logic that is probably higher than you and I do in our every day living.

I hope I never cease to enjoy stories about kids. I hope I am always able to laugh about them. I find myself with an ever-increasing respect for them. The stories I have given you illustrate the strivings of the young child to know, to make sense out of it, to understand it.

We chose the film last night, "How Babies Learn," very deliberately. Remember the ten-month-old with the block who was so frustrated and confused–kind of half-way angry–when that block wasn't under the pillow where she thought it should be? She had thought she understood the world and then something went wrong with it. We chose the film deliberately to remind you, and I think it did very clearly, that a healthy child is far from passive as a learner. Far from it, he's quite aggressive, he reaches out in evaluating the things in his environment.

I stress the point of health, because do you remember that poignantly pathetic, little black kid, ten months old, who really had been deprived of essential appropriate human contact, human relationships. He was unconcerned, disinterested, and he was totally passive, which says something to us about the absolute need for healthy kids.

Now it's true that they were only infants we were looking at last night, but they illustrate very vividly our increasing understanding and appreciation of what I'm calling the natural learning drives of kids. We're finding out some fascinating things about the learning of infants–infant stimulation. We know that with proper materials, proper interactions, that this natural innate striving can be facilitated. I don't intend to spend the morning talking to you about infants. But as I watched, I was struck by an experience I had a couple of years ago. I was in a meeting at Bank Street College and I volunteered the frequently made comment, the concern, what do we do in schools to turn off the curiosity that is natural, that I think is innate in kids.

There's no such thing as curiosity, I was told. I was really put down. And finally I got back up on my feet and was able to ask, well, okay, then, what is it, how would you describe this drive that is within a child, because there is something. I was told that innate within the human organism is the capacity to find satisfaction from new stimuli–there is a tendency to search out, to move out, to new stimuli to find that satisfaction.

Well, you know, I would never have used those words, but I think that's a pretty good definition of curiosity, isn't it? The desire, the searching, the going out to find new stimuli. Now it is this seeking, striving, for understanding, for what Ed Elms called last night *self-actualization, self-realization,* that I think we want to nurture and enhance. That's our job. If I could impress but one thing upon you, if I could stimulate any attitude or change within you this morning, it would be this: that you would leave here, beginning to think about increased respect for the natural, aggressive, learning drives of the young child.

I have been working with kids as young as three and four for about seventeen years now. And with ever-increasing fascination and intrigue. Even so, I was not prepared for the conclusions of probably one of the most significant studies of the whole century thus far–certainly one of the most important research studies of the past decade. How many

of you know the study done by Benjamin Bloom out at the University of Chicago? How many of you know it? It's written up in a book called *Stability and Change in Human Characteristics.* Get ready for something.

Bloom's study is really the thing that inspired, I think, the new focus on young children. Certainly it's what was behind the great attention given to Head Start, the poverty program. It underlies a lot of the so-called intervention–I've come to hate that damn word–programs that we're doing with disadvantaged kids. This was a very comprehensive and exhaustive study, examination of the literature back to the twenties. They listed all the longitudinal studies they could find dating back to the twenties. They did some current survey studies. And they concluded that by the time a child has finished his ninth year–his ninth birthday–he has learned half of what he is going to know by the time he finishes high school. Get that. As measured on the tests we use, by the time a child is nine years old, he has learned half of what he is going to know by the time he finishes high school.

Well, you know, nine is fifty percent of eighteen, it sort of makes sense. But when you look at it a little more carefully, it kind of does something to you, because it really explodes some of our educational myths.

When do we in the public schools say that a child has become an independent learner. When do we say it? Don't we say that when a kid has learned to read and to write and to organize–somewhere in the third or fourth grade–isn't that what we normally say?

Well, does it strike you as funny that before we, in the public schools, recognize him as an independent learner, he has already learned half of what he's going to know. I think that raises some fascinating questions about junior high and high school. But I'm not going to get into that. One would think that as one develops increasing skills in learning that the rate of increase would go up, wouldn't you? But it apparently doesn't. It goes right straight on.

I'll tell you what I think one of the problems is: when I was on the other side of the generation gap, just beginning to get into this business, it was all very scientifically figured out that no child could, should, would, learn to read before the age of six. There was a scientific formula having to do with chronological age, and this and that–neurological development, physiological development, and so on. It just couldn't happen. No kid could read, no kid should read before the age of six.

Have you ever seen a three-year old read? So have I–with apparently no problems. What's happened–what this means–what we did because of this–is to develop a public school system which begins at the age of six, because in the schools we tend to consider learning and reading as absolutely, totally synonymous. What we said was, "Okay, if he can't learn to read before the age of six, then let's not waste any time with him. Let's let him just go merrily on his way." It intrigues me that left to his own devices, without the professional skills that we have to give, look at what the little son-of-a-gun has done. Now some people went into kindergarten at an earlier year, but what did kindergarten become. Kindergarten became a year of reading readiness–getting kids ready to learn. Right?

You know, I have a friend, who, two years ago, said, "Twenty-five years from now nobody's going to read." You know, I pooh poohed the idea. Recently, I have begun to think maybe he's right, because I know some adults right now who don't read. We're going to use media like this character, Barry, over here, is always pulling up. This kind of stuff. And tapes and video. We're going to see within the next ten years some things even Barry can't fantasy at the moment. And it might very well be that within twenty-five years nobody will read. I hope not, because I think reading is absolutely great. I didn't mean to get off on this, but I'm on it. I have a hunch that we will either be non-readers or we will be much more effective readers. My hunch is that if we're creative, and with it, if we can learn to get with it, we can use media as a motivation to reading. Let me give you an example: I am a high school teacher teaching English–wouldn't it be fun to let kids

see three different portrayals of Hamlet–you know, John Gilbert, Leslie Howard, maybe one more–let them see that, first, because Shakespeare was meant to be seen, and by seeing these kinds of things, then they begin to realize that this is interpretation of character. Then, you see, they might be able to read Hamlet much more intelligently. Now I hope that's what happens. It can happen if you and I are on the ball.

Well, some of us have been so deeply impressed by the capacity of this kid to learn that we began to wonder how. How did he do it?

And we're trying to study young kids, trying to find clues as to the way in which they learn the tremendous amount they do.

There's another part of it that I want to touch on briefly. It's one that's misquoted, misunderstood, at times, but let me be sure that I get it clear to you. We used to think that the possible variability in the ultimate level of intellectual functioning, fifty percent of it is used up by the age of four. So that's why you're seeing so much emphasis these days on infant programs, infant stimulation, really trying to help stimulate intellectual development in the early years.

Bloom doesn't identify any number of points or anything like that, but he does say that the possible variability in the ultimate level of intellectual functioning, fifty percent of it is used up by the age of four. So that's why you're seeing so much emphasis these days on infant programs, infant stimulation, really trying to help stimulate intellectual development in the early years.

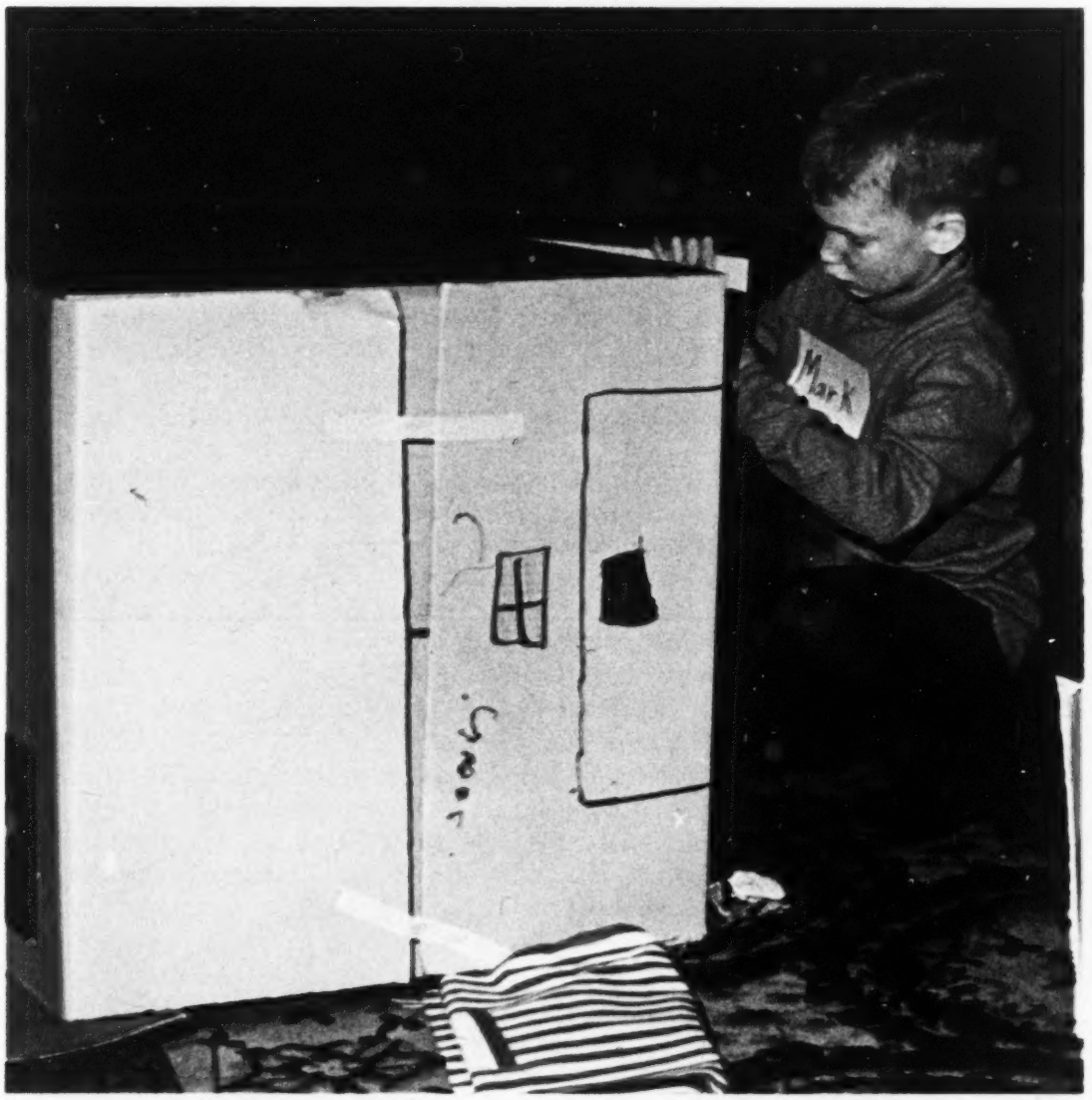
Another important thing that you and I should be terribly aware of, and I see not enough evidence of it, is that an additional thirty percent of this possible variability up or down, happens between the ages of five and seven. Now if that's true, if we are in a position to uplift the level of intellectual functioning–I'm not talking about I.Q., I'm talking about the level of intellectual functioning–between the ages of five and seven, I would like very much to see different kinds of experiences. As I visit kindergartens and first and second grades, I see much too much rote memorization, much too much manipulation. I see very little mind-expanding, mind-stretching, kinds of experiences. We don't know, really, how to expand the intellect. We don't know. But I'm pretty doggone sure that memorization is a pretty weak way to go about lifting the level of function.

I'd be happier if I saw much more problem solving, real problem solving, where kids really have to get in there and knuckle in and think and figure things out, because I think that's the way you stretch and expand the mind. I see much too much manipulation–putting kids through paces and all in groups–everybody's doing exactly the same thing, everybody's getting back the same answer. I see much too much energy going into getting kids to check the right box on a test, or an exam, or to say the right word, the word that the teacher wants to hear. I do not see that as mind-expanding kinds of experiences. I think that any of you who are responsible for developing curriculum with teachers really ought to think about this. You've got a chance in these years–five to seven–to have a lasting lifelong impact on the level of functioning in kids.

Now, along with Bloom, we discovered Jean Piaget. Of course, he's only been working for forty years, but we finally got around to discovering Jean Piaget. Jean Piaget has, by observing first of all, his own children, and many, many more children, come up with some ideas as to how children think, how their minds grow and develop. He's produced a theory of mental development. I'm not going to give you a lecture on Piaget, but I will talk very briefly about it.

He divides the young child into three levels of intellectual development–three periods–*sensory-motor,* which is up to about three years of age; *concrete operational,* three to seven, and *formal operational* beyond that, in ever increasingly refined use of symbols in representation, which finally leads to real thought. Now, it must be noted, if you study Piaget, really, that the child moves upward in his representational ability only by many, many, many experiences with real concrete things–real and varied.

The last five years have seen unprecedented interest in, and attention to the young child. We have money going in. Millions of dollars have been spent for research. We're trying to find out how he learns. We know quite a bit, yet we really know very, very little about our children. We're deeply indebted to learning theorists like Piaget, as interpreted. You know I can't read Piaget. I don't know if any of you can or not. But we're not supposed to. Those people are supposed to interpret him and try to help us implement.



We are indebted to Bruner, for example, for some of his learnings theories, and yet, when I look at what we are doing with some of this stuff, it makes me feel sick, because I think we are misusing some of the ideas that they are setting forth. Bruner, for example, is understood as having said that any child at any point could be taught anything so long as it's properly organized and presented to him. Now in our sense of urgency, our hurry-up–you know, get it fast, get it over with fast–this has led to the reorganization of an academic curriculum so that we can shove it on him early. I call this the "sock it to him" school. We found out that the young kid is responsive, voluable, so "sock it to him." Give it to him before he gets all complicated at the age of seven.

I have seen "geometry" taught to five year olds, and I have seen rote answers given. On the other hand, I have seen principles of geometry learned by children at work at materi-

als. They don't always use the words, but they are developing understandings of basic geometric principles.

Take Piaget. Piaget's theory of the progression of learning activities, classification, seriation, spatial, temporal, and so on and so on. We have used them to manipulate kids. If we put kids through these paces, then we make the assumption that they know, that they have learned. I think Jean Piaget would flip, absolutely flip, if he knew some of the things we are doing.

He was in Washington about three years ago, speaking to a group, and one of the men from the federal government said, "Well, Dr. Piaget, if we know that these are steps through which a child has to go, how can we make it happen faster?" And Piaget literally broke up. He said it's the American question: How can we make it happen faster?

We've been entertaining some Swedish friends recently who have been touring the country, and they are totally aghast at the kinds of pressure we are putting on our kids.

You know, infant stimulation is great, but we're going to overdo it. Eveline Omwake, who used to be President of our organization, has a student who has a three-month-old baby, and she went out to see the baby the other day. You know mobiles are very "in" these days. You hang them over the crib and so on. Eveline said she walked into this bedroom and the ceiling was absolutely rampant with mobiles. And here's the little three-month-old kid busy studying his fist. Isn't that lovely? We're trying to get a photograph of that for YOUNG CHILDREN. Because I think that makes the point so beautifully.

I'm not against mobiles, but, you know, I heard in a recent conference, the Perceptual Motor Development Conference, a woman make the statement that by using mobiles we could save forty-three days? But this is our attitude. I've a friend who tells me that the average life expectancy of a five-year-old today may well be 95 years. Now if the've got ninety more years ahead, why the devil are we hurrying so fast? What is this push? What did the Russian educator say? "What are you fools rushin' for?"

And what are we doing to kids when we do this kind of thing. You see, the interesting thing is it's all well-intentioned, it's all soundly based. Take Piaget, for example. I visited a number of kindergartens a little over a year ago, and I was in a program in the South, where a teacher was working with five kids–these were four-year-olds in a fairly disadvantaged area. She was following one of the good accepted programs of classification, and she had a philodendron plant, she had a doll, she had a plastic apple, and she had an absolutely gorgeous wooden airplane, you know one of these Community Playthings–absolutely gorgeous. So she'd go around the room: "What is this?"

"This is an apple."

"What is an apple?"

"An apple is a fruit."

You know, you say it three times–it's magic repeating it three times. And she came to this last little guy, with the airplane, and he was just eyeing it, like this, and she said, "What is this?" "What is this?" Well, finally, she put in his mouth that this is a vehicle. And he said, "It's a vehicle."

She said, "What is it?"

"Vehicle."

She suddenly, I guess, realized that I was there, so she turned to the kids and said, "Do we have any other vehicles in the room?" And five little heads turned like owls, you know–shaking their heads, "No." But there were wagons over here, tricycles over here, trucks over in the block corner, and the most beautiful view of a railroad train–I don't know where she got it. But you see what I'm saying. She was putting the kids through the motions. They were getting the right word back and they would do well on tests because they could check the damn box, if that was the case. But she's fooling nobody but herself.

This is what scares me, you see. We are taking some pretty sound principles and we are really misusing them. I'm afraid it's showing up. For example, some of the kids out there in Champaign, Illinois, who really, at first, scored pretty well, are now into the third and fourth grades. And you want to know something? They are right back where their brothers were. They haven't made it. It's an empty road kind of thing without real understanding. And, you know, it just makes me heartsick, because of what has been done to those kids and what has been done to their parents. They've been given false hopes, false expectations. It all sounds so good. You know, if you can increase I.Q., if you can score well on standard I.Q. tests, boy you've got it made. But the tragic fact happens to be that they haven't done it. I'm afraid we're working down the wrong alley.

I think one of our mistakes has been that we are too much interested in trying to do something *to* children. We are trying to manipulate them. We are not enough interested in what the child himself is doing.

Maybe we need to move from focusing on what is being taught to what is being learned.

Now there's a very subtle difference, but I think probably it may be *the* difference. It will be the key. As I look and I listen and I read and I talk, I think we're beginning to give more attention, and seeing greater payoff, when we concentrate on the process of concept formation and clarification. The process of thinking, the process of problem solving, rather than one, two, three, four, five, mechanical, sequential steps. Now that doesn't mean that you can't accommodate Piagetian principles in this. You do that by the materials you bring in, by the questions you ask, and so on. But I think we need to focus our attention not on the right answer, but on the process. I think we're beginning to question curricula that are based on normative stages of development.

I hope that those of you who were here in September will forgive me, but I want to repeat some material that was presented to you. Do you remember the sketch that Bruce Gardner made about the learning process? It seems to me that that's about the clearest impression–clearest picture–we've got of what we really do know about learning.

Dr. Gardner, for those who are newcomers, was saying that this is kind of his synthesis of all the things we seem to be learning about the learning process. I'm going to run through this very quickly.

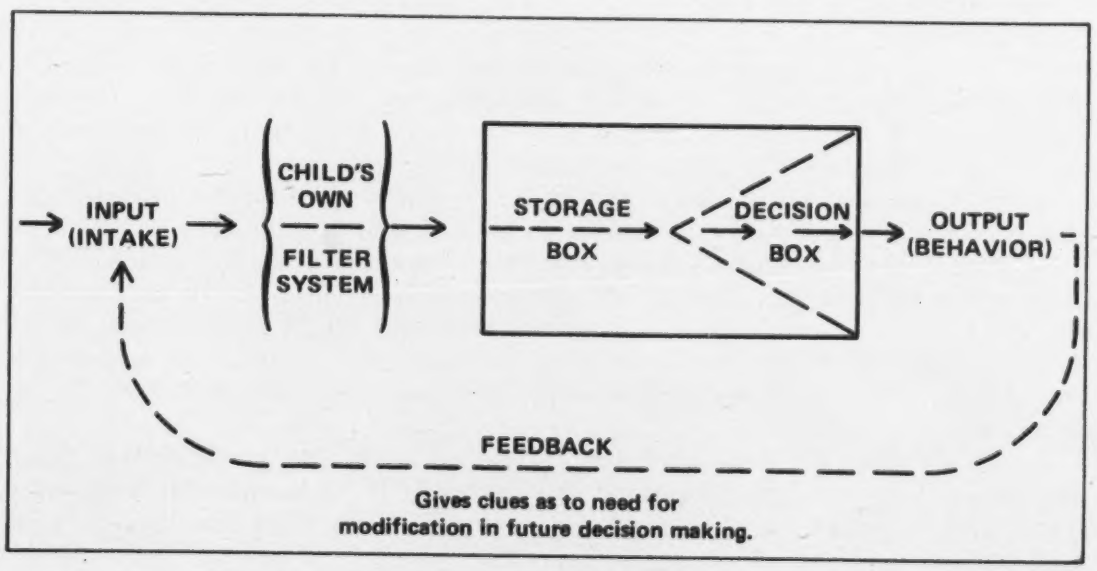


Figure 1

First of all there is input, which is everything that happens to the child. Now the input

goes through a child's filter system, which is uniquely his. Then it goes into something that Bruce calls the storage box. And within that storage box there is one category in which decisions are made. This is the decision-making portion of the brain and out of that, then, comes behavior output, and behavior.

Now, if I had this to do over again, I would change the word *input* to *intake,* because input implies passivity on the part of the child and he certainly "ain't" that. He is very aggressive. We do give some input but that's only a small portion of what he takes in. We've seen children even in the earliest infancy reach out, seek out stimuli that will nourish their developing mental abilities. Here in input/intake is everything that happens to the child, the total area of perception, what he sees, what he feels, what he hears, what he tastes. You and I have a lot of control here in the selection of materials, the selection of experiences, in the language we use, in the questions we ask, in the emotional climate we establish, the expectations we communicate. This is all the total environment, this is the intake of the child. We control it at school, we have no control of it outside of school. If we have time, I want to come back to that, because I have a problem with that. Now here's where you come to the intriguing part and here's where my respect for kids goes up.

You come to the filter system. This is uniquely the child's own. Nobody else has another one like it. You and I as teachers have great influence over it, but we cannot control it or direct it. It's his, unique and different from anybody else's. This is where the little son-of-a-gun has us over the barrel. Here's where he's autonomous. Because he sifts, he weighs, he screens, he rejects, he selects, he modifies. Now this filter system is colored by a lot of things. It's colored, I think, by how he feels about himself. It's colored by how he feels about the teacher and about the other kids. And it's colored by how he feels about school. It's colored by his physical condition. We're learning an awful lot of intriguing things about nutrition, and I have a hunch that this filter system may be one of the places that good health shows up.

The filter system is colored by all sorts of emotional reactions, responses, that are kicked out by the environment. But bear in mind that it's his, and in spite of our good intentions of teaching, he's going to take in only what he wants to take in, and that's why I love the autonomy of the little guy.

Now you come to the storage box and this is probably the place where we know—we don't know much about any of these, but this is probably the place where we know the least of all—no one really knows what goes on. But those of you here earlier, remember that magnificent neurologist, Dr. Spears, who described an intriguing way of gaining knowledge about the things that happen in different areas of the brain and the functioning of the neurological system. We are learning a lot.

Again I'm going to borrow from Bruce on this, because he gave a pretty viable analysis of what happens within the storage box. It's, of course, over-simplification, but I think it helps. Four steps: the first of which is discrimination—the idea of sensing differences. The child refuses to live at the level of what Bruce calls gross lumps. So he separates, he arranges, he puts things in order. I think this is where David Elkind's idea of gating comes in. David Elkind says that kids take in things that they can't handle at the moment, so they put them away some place and close the gate, and that at some later time they're called out.

Courtney Cazden has done some work in language study—it's fascinating that words which a child seems not to understand or doesn't use at the moment are somewhere stored away and then later, when they're triggered off by some association, seem to come back and have some kind of meaning.

Some other interesting things here with infants—are you aware of some of the studies that have been done with reading stories to very, very young infants when they can't possibly know what you're talking about—yet these kids do better in reading in school.

Don't ask me to explain that one, but it's absolutely intriguing. We're urging parents, mothers and fathers, to read very, very early to the kids. But it's in this storage box that the stuff is put away–if I can cope with it then it remains actively there, if not–what we ought to do is try to put a little gate up there in the corner, where you put away stuff that you can't handle yet, but it's there to call upon when something else happens that makes it make sense.

The second step is *abstraction*–in the sense that a child abstracts–he lifts out the quality or the attributes of a thing to form its characteristics. He deals not with the thing itself, or the experience itself, but rather with the attribute that he selects from. This is the beginning of Piaget's symbolic representation.

Then the third step is one called *generalization.* It's from all these things that he's abstracted. The kid develops order, some kind of ground rules to help him accommodate present matters, present experiences, and that will help him in making future decisions. Here is the base for his ability to predict consequences, to select appropriate responses and behavior for new situations–that's where this comes from.

The final thing, then, is *articulation.* Something else goes on within the box. A kid works with these separate components that have been fed in and he brings them together in new kinds of wholes that make sense to him. He finds new combinations of separate units that he's taken in. Sometimes it's what the teacher expects, but not always. This probably is the level at which he would open David Elkind's gate–given the right kind of new intake, new stimuli, he would suddenly make a connection and articulate, then, the new idea. He brings it out of storage. It makes sense. This is probably the level at which creativity is developed. Certainly, it's the basis for a child's approach to problem solving. This, then, leads to his behavior.

Now for those of you who are especially interested in kids with learning difficulties, learning disabilities, I have a hunch that there may be something wrong in the filter system–there may be some kind of block in the functioning of the storage box, or maybe in the decision-making box.

Then Piaget says that a child both adapts incoming knowledge to his view of the world and he adapts his view of the world to new knowledge. What that means is that this is a kind of circular thing and that the child is capable of feedback, which gives clues from his own behavior, as to the need to modify behavior in future decision-making processes. If you and I can begin to look at kids in this way, I think we might have more respect for his role as an active participant–not passive–in the whole learning process. Regardless, don't ever forget this, of our intentions, he has autonomy in selecting and rejecting–he has autonomy in the total reorganization of his own learning experiences. As much as you and I would like to do it, we can't do it.

And I think the sooner we begin to realize that we are dealing with twenty-five kids, each of which has a different filter system, each of which has autonomy in selecting and organizing his own material, the better off we're going to be. Also, I hope it makes us aware of the need to study our input, our contribution, to his intake, and the need for many, many very real experiences with a variety of things.

I said I wanted to get back to the input. Some of you have read *Two Worlds of Childhood* which describes, you know, kids brought up in this country, and kids brought up in the Soviet Union. I'm beginning to think that kids in this country live in two worlds. One world, which begins when they wake up in the morning and ends when the little hand is on the nine and the big hand is on the twelve and a whole new world starts for them. That second world ends at 3:30 or 4:00 whenever school closes and then they go back to another world. I am concerned by the lack of connection, the lack of relationship between life in school and life outside of school. Because, don't forget, we are only a small part of the intake of that child, and I just wish I saw more teachers more aware of this.

I've been working with a wild-haired psychologist down in Florida, it's really a fascinating idea. We're talking about developing a curriculum for K through 3 that would be based only on the television programs that kids watch. Sunday night–I'm not a TV bug–Sunday night I watched *The Wild Kingdom* and *Star Trek.* Boy, the questions that could have been triggered off by those two programs, the motivation to learn, the motivation to find out–I'm afraid that kids are not bringing the questions they get from television to school to their teachers. I really think that our kids are living in two separate worlds. Wouldn't it be fun and wouldn't it give them a better break if we could begin to make that world one world. I think maybe we're going a little far down in Florida, but maybe we have to go to that extreme to kind of make the point.

There's another way of saying what I've been trying to say. George Kelly, a psychologist, in a book called *The Theory of Personality Construct,* says that every man is a scientist. And as a scientist, he ascertains the properties of all of the elements in his environment, physical and human. And knowing the properties of the elements in his environment, he is able to predict. And by being able to predict he is able to control.

Now can you see that kind of logic applied to an elementary aged child. Well, let's apply it to an eight-month-old baby. Have you ever seen an eight-month-old baby pull himself up to the side of the crib, hang on with one hand and take his furry toy in this hand, and by learning about his thumb and his finger, he moves them like that–what happens to the toy? Drops to the floor, doesn't it? Is this not ascertaining properties of the elements in your environment? Okay, then what happens when that hits the floor? What happens? He cries. Mother comes running then, and, you know, it comes back to him. And he does exactly the same thing. The little son-of-a-gun, before you know it, has control over this mother. Now if that's applicable to an eight- or nine-month-old baby, it is certainly applicable to older children.

Wouldn't it be fun if we had the guts, to have the flexibility and freedom, to develop a program, a school program, which would enable kids to become the scientists that they are by nature, that would accommodate them? These are natural drives that we are talking about.

I just want to end up by making one point. Although we are met today talking about learning of young children, every single word that I have said is what we are learning about the learning process. And everything that I have said applies not only to five-year-olds, it applies to fifty-five-year-olds. I have a hunch that we, if we can pull it, are going to have real impact on the way schools operate all the way up to the graduate school level.

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DEVELOPING CURRICULUM FOR YOUNG CHILDREN

We have some four-year-olds at Hunter College Elementary School. The teacher was doing some work with papier mache, and, as most teachers, she thought that perhaps she could save the papier mache from one day to another and not have to mix it all again. Of course, when she opened up her storage can the next day, she had a gorgeous mold growing.

Instead of just closing it up and forgetting about it, she called all of the children over and said, "Look what happened! Look what we have here!" They got into a very involved discussion of what had happened and why it had happened. She admitted to me later that, really, she didn't think most of them understood what she was talking about, but she did want them to see what had happened.

Two weeks later she was preparing the tables for lunch–most of her group were out of the room with another teacher–but one little boy, who was hyper-active, shall we say, had been brought into her room and she had said to him, "C'mon and help me, we're going to set up for lunch now." And the first thing he said to her was, "Cover the bread," and she said, "Why should we cover the bread, we're going to put it out on the table?" And he said, "You know it will get"–and he couldn't think of the word he wanted, and finally he pointed up toward the ceiling and he said, "You know, like that." She really

didn't know what this child was talking about, and she named all the different parts of the ceiling. She said, "ceiling," "wall," and finally she said, "molding."

And he said, "That's it." Now this child had stored whatever information he had picked up from that experience about mold, had kept it in his mind, and now was relating it to the fact that here was bread and she had said that sometimes mommy has bread and she takes it out and it has some mold growing on it. Then he had made a further connection in his mind between the word *mold* and the word *molding* that goes around the top of the wall before you get to the ceiling.

This experience impressed itself on me terrifically, because it shows us we really don't know how these little minds are whirling about, and what they are doing with the information. It also points out that we should not deny children experiences because we don't think they're ready to use them.

Milton ended by saying what we're learning about how children learn also affects how adults learn, and so on. I went from teaching kindergarten children to teaching college people. In fact, some of my friends used to say I went from small toilets to large toilets. One of the things I learned in my methods course was that instead of standing and talking with a class, as many of my colleagues do, I gave the college girls the same experiences that I might have given to the kindergarten children.

For instance, when we were doing science, I suggested to the class that we break up into groups and I sent one group out and I said, "Walk around Gillett Hall and look up." To the second group I said, "Walk around Gillett Hall and look down." To a third group I said, "Walk around Gillett Hall and just look at a normal eye level." When they got back into the room we talked about the things that moved, the things that had certain shapes, the things that had certain colors that you saw when you looked up, that you saw when you looked down, and that you saw when you just looked at eye level.

And to this day I meet some of these students who say to me: You know, I'm doing that with my kindergarten, or second grade, or whatever it is. Because it was a first-hand experience and it was something that was meaningful. Now I mention these things because this is the basis of what we want to do with and for children in curriculum.

When I talk about curriculum, for instance, I am talking about organized experiences for children in a small setting. But within that organization should be so much flexibility that although the teacher comes in with one plan in mind it need not be adhered to. The children's interest, what the children are particularly excited about, the television show that they saw the night before, or questions that have been raised on the way to school, should take paramount precedence over what the teacher herself planned. If this teacher is, indeed, providing an appropriate curriculum, she will give the leeway, she will give the kind of format that allows for planning around what children really are interested in doing. There must be an enormous amount of flexibility, so that you can use the interests of your children. I think there's nothing sadder than going into a classroom and seeing children–I won't even say "active" because that's too active a word to use–seeing children involved to a degree that's a very superficial one, in doing something that was not of their choosing, that is not of any importance to them, and so they're just going through the motions.

Yesterday morning, I was in a pre-kindergarten out in Queens, and the teacher said to me, "One of the things that bothers me is that I've gone over and over the calendar and my children still don't know that the week begins with Sunday." I said to her, "Did it ever occur to you that these children are too young to be going over and over and over the calendar and that if you stopped doing that maybe in a year or two they'd pick it up immediately?"

And I added, "You know for some children, Sunday's the first day and for some children Sunday's the last day." And I pointed out to her that just a week ago I had been in the same school, in a kindergarten class, and the teacher there used to teach second

grade. And she said to me, "In second grade we always used to teach children to tell the time. I don't know whether children are getting smarter, or we were just waiting too long, but all of my kindergarten children can tell the time."

She had this little routine where she had a large clock and she kept putting the hands at different times, and it was true, the children were telling time.

Now I'm telling you this because I want you to see that there is no such thing as a set curriculum, at a set time, for all children. Some children are ready to tell time when they are in kindergarten. But I have a colleague who happens to be an outstanding authority in secondary social studies who admitted to me recently that she never learned to tell time until she was in the eighth grade. She said there was no need for her to tell time, and then, suddenly, when she was in the eighth grade, there was the need and she was terribly ashamed and upset to discover that everybody else could tell time and she couldn't, and she had to really work on learning how to tell time. Of course, it didn't take her very long to learn to tell time in the eighth grade. But you see it didn't matter to her—she had no need for telling time earlier.

Now, sometimes, the teacher makes the need felt—and this is where the teacher's role comes in, in the preparing of curriculum and organizing activities. But, if it's just a teacher-motivated part of curriculum, it will remain just that, as in the teaching of the calendar in the pre-kindergarten class of four-year-olds. Those kids couldn't have cared less, so they're not learning about the calendar.

By the way, talking about the calendar reminds me of another experience I had. I went in to supervise a student teacher in the second grade, where they were learning about the calendar. It happened to be the first day of the month and she had made a calendar up on the blackboard and she was starting from a very real point of view—the children's own birthdays—who had the birthdays in this month. This is good motivation for looking at the calendar, you see. She would have the child come up and show her the number on the calendar that she had printed on the board.

But she called on one child and he said, "I can't show you."

She said, "Come up here." He went up to the blackboard and she said, "Show me your birthday."

He said, "I can't."

Finally she said, "What's the number, what day is it?" He told her, and she looked, and she had left that day out. In making the calendar, she had just skipped that number.

I think we must realize that children are motivated to look for something of their own in anything they're doing. This is one of the reasons why, when we talk about children learning the alphabet, instead of teaching them the A, B, C's as they did in the old days, or instead of just doing a phonics approach, if children are helped to learn the letters of their own name there's high motivation. This is natural interest. Every one of us is concerned about ourselves and our own name.

Generally, in the nursery groups, in the pre-kindergarten groups, in day care centers, and so on, children are given something with their names printed on. In the Head Start Center that I was working with, they had taken those old wonderful wooden cheese boxes—I don't know where they'd accumulated them over the years, nowadays they use cardboard—but these were the wooden Breakstone cheese boxes. The teacher had covered them, and had put an oak tag with the child's name on each one, and the child kept his scissors and his crayons, his paste, and all the little things that he needed, in the cheese box.

One morning a child came over to the teacher and pulled at her dress and said, "Put my name on my picture." And she looked at him and said, "You can put your own name on. Go and copy it from your crayon box." The teacher didn't realize this was a child who had come in late, and nobody had made the tag for his box. Well, she brought and showed me a picture done by that child, that said "Breakstone" on the bottom.

That, of course, points out something else. Children are interested in printing their own names, but they really don't know what they're printing. So they're just as likely to print "Breakstone," or whatever it is.

However, we are very excited when we see children who care about printing and who are doing it because they're interested. You will find many little children who will copy all kinds of signs without knowing what they are copying. Or they will pretend that they are writing letters, or books, or stories, or something of that sort. And we know that this is a sign of real readiness for writing and reading. These are the things that teachers must look for.

And we have to always keep in mind that each child is different. I think I was born saying each child is unique and I'll die saying it, but I hope that somewhere in between, teachers and school administrators will take it to heart, because we've been talking for so many years about individualizing instruction, and then we give a teacher thirty children and she tries to teach them all in one big group.

I think we've had some progress in the last ten years along those lines. I think that the whole idea of Head Start, having a teacher, an aide, a family worker—maybe three adults in a classroom—will break down some of this large group instruction. Because we're learning, more and more, that when a teacher asks a question of a whole group, she's not getting the answers from everybody in the group. I can't tell you how many kindergarten teachers I hear asking, what is this shape, or what is this color, or whatever it is. And then, you know, she gets this unison response to the things she's taught—that this is a square, or this is a cube, or this is a red something. But what she's getting is one or two responses from the group that are loud and clear, and she thinks she's taught it, and that's done. And then she's very surprised when her group really doesn't know size or shape.

Now, first of all, she's not handling it in the proper way. She's not individualizing. She's also not giving children many different experiences that deal with the same subject. And that's another thing that I'd like to discuss for a few minutes. If you are indeed concerned about teaching children shapes and things, you can't do it just by having a square, a triangle, a circle—which is what I see everywhere. What do you see in this room? I see the seats of chairs that may be square or rectangualr—it's easier if we pick a rectangle—I see the parts of the door, the door itself, the shape of the room. Go and pick up things in the room—a book, all kinds of things—and you're helping children through having them do things, having first-hand experiences, instead of talking this abstraction of squares and triangles, and circles, and rounds, and so on. We've been confused about this for a very long time.

I was with a four-year-old, recently, in a living room that happened to have on the sofa several cushions and she went over and she picked up one and said, "Look at the triangle!" And she said it with such exultation. Why? Because she knew she had learned something. Children really get real pleasure from learning. This child was taking something she had learned in a formal situation in nursery school and applying it to this little triangular sofa cushion. And then there was another one on the sofa and I held it up and I said, "And what's this one?" She said, "That's round. It's all just like in school." She was so thrilled that there was this bridge from school to her other world at home.

We, as teachers, we, as administrators, have to see that we give a myriad of experiences, so that they are repeating the same kinds of concepts until the concepts really develop. I was in a classroom the other day where the teacher said, "If you could pretend, what would you be?" She was doing a very nice job with this whole idea of imagination and pretending. But then she wasn't checking up when the child said he wanted to pretend to be an astronaut, or pretend to be a nurse—a little girl said—whether the child really knew what the astronauts did or what the nurse really did.

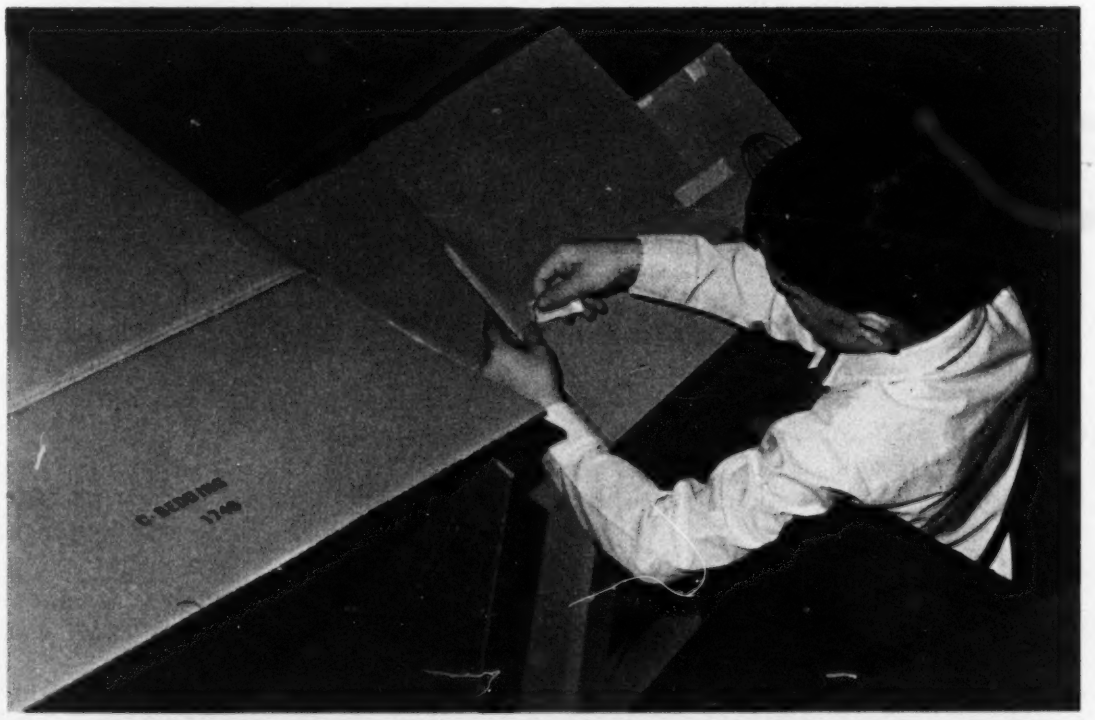
Now, with young children there's a lot of confusion. We find young children who, if they know that a nurse has a white uniform and white shoes, may think that every person

in a white uniform and white shoes is a nurse. They need first-hand experiences, for instance, to the bakery shop, where the lady may wear a white uniform and white shoes, to various places where the child gets the experience that the white uniform and white shoes are not just a property of being a nurse. The child whose mother is a nurse thinks, when he's very young, that all mothers are nurses. So we have to give him many, many experiences until he gets the idea that his mother is a nurse but some other mothers are something else.

How do we give these experiences? How does this fit into curriculum? By letting children interact very freely in an environment that is well prepared for them. I know some of you are dealing with children who have learning difficulties. We talk about children from disadvantaged homes having chaotic backgrounds and needing very structured environments, yet we mustn't have so much structure that there's no richness. We mustn't have clutter, and we can't confuse clutter with richness.

The environment that the teacher sets up in the classroom should be such that the children can go around and use materials, and ask questions, and explore, and learn by using materials, by interacting with materials, interacting with other children, having a rich socio-dramatic play—whether the child is in a housekeeping corner, or a block center. Building with blocks, children are saying: "Let's make believe. Let's pretend. You be the this, and I'll be the that." Or, "this is an airport," and so on.

There's a lot of imagination, and there's a lot of absolute concept development involved, too. If you're building an airport and your airplane is this big, how big must the hangar be? Well, there you have a math concept involved, size relationships, and bigger and smaller, and so on.



There is no part of curriculum that isn't related to another part of curriculum, and this, I think, is another thing that we need to look at very carefully. Many principals have said to me, they don't know how to go in and observe and comment on an early childhood teacher's class, particularly, in kindergarten, because they can't separate out, they can't write up the observation report and say I saw a lesson in language arts, or I observed a lesson in social studies. I say, Great! You shouldn't be able to. Because if this

is the proper kind of curriculum for children–and I won't even say for young children, I'll say for all children–it should be so integrated that you can't really say that when children are working in the housekeeping corner that's only language development. It isn't only language development. Perhaps it is, largely, because they are talking to each other and communicating and interacting, but it's so many other things as well, because you have math learnings, science learnings, everything else involved at the same time. When children are using water and other materials, they may be doing it in the housekeeping corner, but mathematics learnings are involved, as they're pouring and filling a vessel, full, half full, more or less–all kinds of learnings are involved there. The non-numerical math, you see, as well. As they're mixing water and sand or water and flour, they're learning about properties of water and of these other materials, so science is involved, 'oo. And to think in terms of curriculum being, say, seven different curriculum areas, each distinct and by itself is a great error.

I think, more and more, as we're getting the British Infant School concept across in our American schools, we're seeing less of the distinct cutting up of the curriculum. We're seeing much more of this wonderful flow of children learning, and doing, and being, and interacting, and feeling good about themselves, within a kind of continuous stream. Here again, is the flexibility–not feeling that you must have reading from nine to nine-thirty or ten, and you must have math from ten to ten-fifteen.

And that reminds me that I was in a second grade classroom a few years ago, with a wonderful teacher who believed wholeheartedly in having children participate in making their decisions for their own day. So in the morning, as they did in almost every class in this public school, the children, with the teacher, would put on the board the program for the day. Now in most classes it was a terrible routine, it was dry, and horrible, and the kids couldn't have cared less. But in this second grade, the children really responded, and they would say to the teacher, let's read first, and then we'll have time for such and such and so on.

Now, this one day a child raised his hand and he said, "Let's put in time to do nothing." The teacher, although she was young and rather inexperienced, had enough *faith* in children–and that's another thing we've got to underline, in constructing curriculum you must have faith that children will learn through their own experiences and not just the things that are force-fed, in fact, they will not learn through force-feeding–she had faith in these children and so she asked, "How long should we have for doing nothing?" They decided to have ten minutes. So from 10:00 to 10:10, she put down "do nothing."

When ten o'clock came it happened that a child vomited, and the teacher had to take the child to the nurse, and send for the matron to clean up and so on, leaving my student teacher in charge of the class. My student teacher was terribly upset that here she was going to have the class for ten minutes of "doing nothing." But she got up and said, "Well, now we're up to–what does it say?" And somebody in the class read it and said, "It says 'do nothing.' "

She said, "Okay, that's what you have to do." And the children sat there for a few minutes, not knowing what to do with themselves, and then they just started talking, and at the end of ten minutes they went on to whatever the next time period required.

The next day, when they were planning, again, this little boy raised his hand and said, "Let's have a time for doing nothing." But the rest of the class outvoted him vociferously. No, they didn't want it, they really hadn't enjoyed it.

Look at how wise that teacher had been. She had let them try it out. She had let them see that, really, they didn't need that, because in her classroom, you see, was this climate, anyway, where they had some time to talk to each other, at many times during the day.

That brings me to another part of curriculum planning. Curriculum planning must include within us the attitude that children are out of their seats, that they are not tied

down to one specific place in the room, that there's freedom, not only of choice of activity, but choice of movement within the room. If a child wants to go over to one side of the room to sit down with a book, he can. He doesn't have to do it just in one place. Of course, we can't have license, and, particularly in kindergartens and rooms that have a lot of water-play, we must make rules. You can't take the water over to the library corner and have your books swimming. But you are able to have people interacting and going back and forth.

I have seen programs where teachers have thought they were doing a pretty good job of planning curriculum on paper, but where they were so rigid in keeping children in certain spots in the room that there weren't enough occasions for interaction. For instance, as children are playing with blocks, or moving around with trucks or something of that sort, they get involved with the children who are in the housekeeping corner. And they should. This is wonderful interaction. But in the classroom where the teacher is keeping each section so sterile and by itself, you don't have that interaction. The teacher who foresees the need for all of the interaction, promotes it. And that's the same teacher who, when she sees a child who's not doing anything, or who hasn't selected a center of interest, takes on the role of playing with the child, and says, "Let's go visit in the housekeeping corner." She knocks on the door and says, "This is my friend, so and so," and gets the child involved in the housekeeping activity. If she sees that the children aren't touching the blocks, she either goes over and sits there, or assigns another person in her room to be there to spark some activity in blocks. I remember a classroom where just the use of a big piece of blue cloth, which became a lake, a river, all kinds of things, changed the block play very radically.

Now, I said that no curriculum area should be so separated from any other that they're discrete. For instance, I remember children saying we need a sign that says "Don't step on the grass." So she made that sign. And she said, "But where's your grass?" And then a child went and got green crayon and paper and made some grass quickly. And before you knew it they were making all kinds of signs. They were rebuilding a park. Where did this activity come from? They had been on a walk to a neighborhood park, in the spring, when there was a sign that said, "Keep off the grass."

Now the children hadn't taken the actual words, "Keep off the grass." They had their own words. And using children's own words for reading back and for really using the words builds up the vocabulary, and the interest in reading those words. So to say that reading or language arts is separate from free-play, when children are using the blocks and housekeeping corner and so on, is very wrong.

And I must also say that when I mention blocks and housekeeping corner, I'm not only talking about nursery or kindergarten classes, I'm talking about first and second grades, and, I hope, even grades further on up. Children can bring an intricate knowledge to block building, as they get older. If you haven't seen the Play School film—it's an old one—on blockbuilding in an after-school center with ten-year-olds and twelve-year-olds, you really should see it. Children can learn very much, and express very much, through block-building.

You know, we've heard, the last few years, thanks to Bruner, the idea that anything can be taught to any child of any age. And we've heard about the need for consumer education in the lower grades. Well, lots of children in many lower grades have been having consumer education in their free-play.

I was in a classroom, just recently—a kindergarten—where the whole end of the room consisted of shelves with empty boxes. And I must say that the teacher had used great care in seeing to it that the boxes were clean and really empty, because, you know, especially in New York City, we can have many of those little crawling things.

They were all classified, so that you had cereal boxes, and you had other kinds of food, and you had cans of different kinds, and so on. And right there as I stood and

looked at it for a minute or two I realized that here was a wonderful experience in classification. Above each classified group–above each category–was a sign which said 4¢, 2¢, and so on, prices in the lower numerals so that children could handle them.

When they broke for free-play, the teacher asked, "Who wants to go to the store?" and four children raised their hands. And she asked, "Who wants to be the checker? Who's going to be the shopper? Who's going to be the man to replace items?" These children, in socio-dramatic play, were getting the whole idea of some of the basics of consumer education that people have been talking about. And they were doing classifying, and numbers, and all sorts of things, involved in this playacting about the store.

Now this has been going on for many, many years. I'm sure all of you in this room at one time or another have had children who have played store in this fashion. It behooves us, now, to look at it, and to help make it the most it can possibly be. And I think kindergarten teachers, and first and second grade teachers, for many, many years have been planning experiences for children that were good and were appropriate. But kindergarten teachers, I think, were guilty of a more haphazard or accidental learning kind of situation. They were guilty of two things, really–accidental learning, on the one hand, and force-feeding, on the other, so that you walked into every kindergarten in New York City, in January, and everybody was doing "the family" or whatever.

Now, it can't be that the interests of the children are such that every kindergarten child in New York City is interested in the same thing at the same time. There may be variations and there should be variations.

In Cincinnati, where I was doing some work on early childhood curriculum, the superintendent asked me what I thought about writing a curriculum guide. I said it's very hard to keep it a guide; it becomes a bible or a cookbook, and I said I frankly don't believe in writing a curriculum guide of that sort. Of course, I was embarassed, five minutes later, when she presented me with one that had already been done. But I flipped through it, quickly, and I was able to show her why I had said what I had said. On a certain date, in October, it said, "seeds and planting." And I said to her, "In Cincinnati, I guarantee, every one of your kindergarten teachers is going to be doing seeds and planting in that week in October. Do you mean for it to be that way?"

She said, "No, this is just a suggestion."

I said, "Yes, but the teachers aren't going to see it that way. And what's going to happen in the spring when really they should be doing seeds and planting?"

She said, "Well, I don't know how to get around that."

I told her that this is the problem when you give a specific date and a specific topic. You should have a whole list of possibilities from which the teacher can draw, you see, with no dates on them, nor with any directions that she must adhere to these.

I remember when I was assistant director of early childhood education, a teacher complained to me that in her school she wasn't allowed to have a unit on dinosaurs in kindergarten. She said her principal said it's not in the early childhood curriculum bulletin. And it wasn't, because when that bulletin was written there wasn't an awful lot of interest in dinosaurs among young children. It's since been changed, of course. But I had to go and see that principal, and explain to him that what was in the guide was only supposedly a suggestion of things to be done. And if children came in very much interested in dinosaurs, what could be a better source of planning curriculum. They were interested. It was real. It was meaningful to them. I can't underline that enough.

We must have planning, because we don't want a chaotic situation, or this accidental learning I'm talking about happening all the time. Certainly we want accidental learning–things that weren't planned–but the teacher has to be taking cues from children. She has to be listening and observing and knowing what children really are about, so that she can list in her plan book the things that she thinks she'll need for the next week.

I remember walking into a pre-kindergarten classroom, and no teacher was there. And

I said to the children, "Where's your teacher?" And they said she just went out. She had gone for a projector. When I had my conference with her later, I asked "Did you know the night before that you were going to need it, and how is it you didn't have your projector in the room?" This is the kind of planning you expect a teacher to do. If the children have evinced some interest in a certain subject, and you decide you're going to show them a film or slides, you make those plans ahead of time, not just on the spur of the moment, and then leave a whole class of children waiting while you go to borrow it somewhere.

This is what I use as my reason for asking for plan books. Lots of early childhood teachers don't want to make plan books. I used to say "Oh that plan book—it's for the birds." You know, it's just for the assistant principal to read. But I once took my kindergarten class to the telephone company—and the manager of the telephone company wrote a letter to the school, commenting on the fact that the kindergarten class had been there. The assistant principal came into my room and said, "Why didn't you tell me you went to the telephone company?" I said, "Did you read my plan book?"

She never read it. She just stamped it, you see. So I had very strong feelings that as a teacher I was writing plans that were meaningless to her. To me they were meaningful, from the point of view of being a kind of log of what children were doing. And I insist that teachers should do that. You need some kinds of annecdotal records. You need some kinds of notes on the development of individual children—Johnny did talk today, or he did skip, or he did participate, or he didn't, or whatever it was, or so and so painted for the 11th time in a row, you know, things of this sort. You also need a plan book so that you can correlate your films if you have them with your story books, with your songs, that you're going to teach, or the finger plays that you want to use, things of this sort.

If you're doing something on a specific subject, you get every book you know of about it—and you don't only write it in your plan book, but you get it into the library corner. So there is correlation, and there is planning.

I'm not saying that because of the need for flexibility, and answering the interests of children we have complete license and no planning, and no structure. Structure is given by the way your room is set up and by the use of materials—how much you have out, how much you hold back for when your children are more developed and need more difficult puzzles or more intricate games or things to use. Structure comes from classroom management. We're helping children, through our curriculum in early childhood, to be self-realizing children, who can be independent, who can go and get their own materials and come back and use them. And to be children who don't have to be handled as a whole group, because while you, the teacher, are working with one or two or three children, the other children can go and get their own materials and they know what to do with them. They can interact.

In an early childhood curriculum, there should be some kind of a hum of activity, not absolute silence in the room. There should be lots of flexibility of furniture, so that your space is used flexibly. And your time is used the same way, so that if, suddenly, something happens, everybody can put hats and coats on and go out and look at something in the yard.

I recently saw a class that was out in the playground, and a teacher came along and said, "Hey look at those shadows. I see Jane's shadow. I'm going to step on Jane's shadow's head." She did that, and before you knew it all the children in the group were reacting, and going after each other's shadows, and seeing what happened as they moved. And then, because of this experience, she said, "Let's go in now and come out an hour later and see where our shadows are." At one point, she had a child stand still, and they drew around the shadow with chalk and left it there, and when they came out an hour later they had the child stand in the same spot, and they drew around and saw how it had changed.

Here was a terrific science learning that was triggered off by a physical activities time out in the yard. How many teachers just stand with their arms akimbo in the yard and the children either do or don't do something worthwhile? I think there must also be interaction among teachers, and interaction among teachers and administrators. Kindergarten teachers say to me, by the thousands, "I hate to send my children into first grade where they're going to be kept sitting, where they're going to be held stiff and still for so long, and where, when they have recess, they go around one circle and everybody has to do the same thing." They go from one kind of experience that's free and exciting, to another that's very tight and far less exciting. And I have said for years that this is where our school dropouts begin. Right there in that first grade.

We have to help the principals, supervisors of whatever sort, and teachers understand that children don't have to be sitting in seats all the time to learn. I think of the Lillian Weber film—which shows children in British Infant Schools lying on their stomachs, writing, and reading. We here in America don't think in terms of kids out of their seats and writing on the floor while they're learning. And believe me they can learn on their seats or out of their seats, and on their bottoms, it doesn't matter on what, you know. They can learn outside of the room, as well as inside the room. And they can learn from each other as well as from teachers.

I'm going to stop at that and just try to summarize by saying self-motivation, the children's own interests, flexibility, and interaction—these are key words as far as I'm concerned when it comes to an integrated kind of curriculum.

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